

**Oracle® Utilities Service Order  
Management Integration to Oracle  
Utilities Mobile Workforce Management**

Release v2.1.0 Service Pack 3

Implementation Guide

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Oracle® Utilities Service Order Management Integration to Oracle Utilities Mobile Workforce Management Implementation Guide, Release v2.1.0 Service Pack 3

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# Preface

## Audience

This document is intended for anyone implementing the Oracle Utilities Service Order Management Integration to Oracle Utilities Mobile Workforce Management.

## Documentation Accessibility

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# Part 1

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## Understanding the Integration

This section provides an overview of the participating applications and information regarding the business processes addressed by this integration.

This section contains the following chapters:

- [Introduction](#)
- [Understanding the Integration Process](#)

# Chapter 1

## Introduction

This document provides configuration and administration information for the integration between Oracle Utilities Service Order Management (SOM) and Oracle Utilities Mobile Workforce Management (MWM).

- [Additional Resources](#)
- [Abbreviations](#)
- [Prerequisites](#)
- [About the Integration Product](#)
- [Supported Business Processes](#)

### 1.1 Additional Resources

The following additional resources are available:

Resource	Location
Oracle Utilities Service Order Management Integration to Oracle Utilities Mobile Workforce Management Release 2.1.0 Service Pack 3 Installation Guide	Same folder as this document, with the distribution for this product.
Oracle Utilities Smart Grid Gateway Release 2.1.0 Service Pack 3 Release Notes	Refer to Oracle Utilities Service Order Management documentation located on the Oracle Software Delivery Cloud ( <a href="https://edelivery.oracle.com/">https://edelivery.oracle.com/</a> ) or on the Oracle Technology Network ( <a href="http://www.oracle.com/technetwork/documentation">http://www.oracle.com/technetwork/documentation</a> ).
Oracle Utilities Service Order Management Release 2.1.0.3 Documentation	Refer to Oracle Utilities Service Order Management documentation located on the Oracle Software Delivery Cloud ( <a href="https://edelivery.oracle.com/">https://edelivery.oracle.com/</a> ) or on the Oracle Technology Network ( <a href="http://www.oracle.com/technetwork/documentation">http://www.oracle.com/technetwork/documentation</a> ).
Oracle Utilities Mobile Workforce Management Release 2.2.0.2 Documentation	Refer to the Oracle Utilities Mobile Workforce Management documentation located on the Oracle Software Delivery Cloud ( <a href="https://edelivery.oracle.com/">https://edelivery.oracle.com/</a> ) or on the (Oracle Technology Network ( <a href="http://www.oracle.com/technetwork/documentation">http://www.oracle.com/technetwork/documentation</a> ).

**Note:** For specific edge application patch level details, refer to the Oracle Utilities Integrations page at:

<http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm>

**Note:** The latest versions of these documents are available on the Oracle Technology Network at:

<http://www.oracle.com/technetwork/index.html>

## 1.2 Abbreviations

Abbreviations used in this guide are listed below:

- BPEL - Business Process Execution Language
- CDI - Common Dispatching Interface
- DVM- Domain Value Map
- EBF - Enterprise Business Flow
- MDS - Metadata Store
- MDT - Mobile Data Terminal
- MWM - Oracle Utilities Mobile Workforce Management
- SOA-Service-Oriented Architecture
- SOM - Oracle Utilities Service Order Management
- SP- Service Point
- SR- Service Request
- AIA- Application Integration Architecture
- FA - Field Activity

## 1.3 Prerequisites

All the participating applications namely the Oracle Utilities Service Order Management, Oracle Utilities Mobile Workforce Management, and Oracle Service-Oriented Architecture (SOA) Suite must be installed, set up, and working properly.

## 1.4 About the Integration Product

This section provides general information about the functionality and processing of the Oracle Utilities Service Order Management Integration to Oracle Utilities Mobile Workforce Management.

**Note:** This is an AIA Direct Integration using SOA and does not require AIA Foundation Pack to be installed.

The following products are involved in the integration:

- [Oracle Utilities Service Order Management](#)
- [Oracle Utilities Mobile Workforce Management](#)



## 1.4.1 Oracle Utilities Service Order Management

Oracle Utilities Service Order Management supports centralized orchestration and management of service requests in the smart grid. Service requests include the set of processes involved when changing or checking the status of the (metered) utility service. These are generated from customer requests or collections, meter data actions, maintenance operations, or by ad-hoc field crew tasks. Oracle Utilities applications such as Oracle Utilities Customer Care and Billing, Oracle Utilities Meter Data Management and Oracle Utilities Operational Device Management generate service requests and the smart grid is leveraged to handle them in Oracle Utilities Service Order Management. Oracle Utilities Service Order Management provides insight into the progress of in-flight processes, which helps end users identify issues with individual transactions, and assists analysts of the application in improving service order processing efficiency.

Historically, the service requests were handled in Customer Information System, which had information about service points and meters, and were integrated with a workforce management system. Oracle Utilities Service Order Management is a common platform for all the Oracle Utility applications to initiate and receive updates related to all work activities at customer service points. Oracle Utilities Service Order Management expands the Oracle Utilities Smart Grid Gateway scope to support both manual activities via mobile workforce management and automated activities via AMI activities while Oracle Utilities Smart Grid Gateway is a common platform for all the Oracle Utility applications to interact with smart devices. Both Oracle Utilities Service Order Management and Oracle Utilities Smart Grid Gateway are developed in the same platform: database / application / integration hub.

## 1.4.2 Oracle Utilities Mobile Workforce Management

Oracle Utilities Mobile Workforce Management simplifies and optimizes the scheduling, dispatching, and tracking of field activities and mobile service crews.

Oracle Utilities Mobile Workforce Management has three functional components:

- **Resource Scheduling and Planning:** Supports resource planners and service managers in managing resources, planning shifts, and scheduling work. The system automatically generates shifts and optimizes the schedule based on your business rules. This component comprises the following user functions:
  - Resource Management setup and maintenance
  - Service Management setup and maintenance
  - Scheduler setup and maintenance
- **Common Dispatching Functionality:** Supports dispatchers as they handle exceptions throughout the day, and enables context-based decision making at the dispatcher level. The system can be configured to automatically dispatch all activities or limit auto-dispatching to certain activity types or shifts. The system maintains real-time communication with mobile resources, tracks the location of crews and vehicles, and allows dispatchers to monitor and manage activities, crews, alerts, and key performance indicators. Common dispatching functionality is provided through the Common Dispatching Interface (CDI) portal.
- **Mobile Communications Platform:** Supports mobile crews as they perform service work, facilitating communication with the dispatcher, providing GPS-based mapping services, and processing activity status updates and work

completion details. The Oracle Utilities Mobile Workforce Management mobile application runs on a mobile data terminal (MDT) device or a laptop.

## 1.5 Supported Business Processes

Oracle Utilities Service Order Management - Oracle Utilities Mobile Workforce Management integration involves the following:

The activities that are related to field work will be routed from Oracle Utilities Service Order Management to Oracle Utilities Mobile Workforce Management so that crew can work on those activities. Once the activity (field work) is completed, crew sends completion message back to Oracle Utilities Service Order Management, which in turn sent to subscribers.

The field activities are the specific activities that are routed from Oracle Utilities Service Order Management to Oracle Utilities Mobile Workforce Management. Oracle Utilities Service Order Management sends new activities/updates/cancellations to Oracle Utilities Mobile Workforce Management.

Oracle Utilities Service Order Management also requests for the appointment slots and activity status from Oracle Utilities Mobile Workforce Management.

Oracle Utilities Mobile Workforce Management sends the completion message to Oracle Utilities Service Order Management. The field-initiated cancellations are also supported.

Oracle Utilities Mobile Workforce Management requests Oracle Utilities Service Order Management for device verification.

Oracle Utilities Mobile Workforce Management requests Oracle Utilities Service Order Management for the service point information in order to create unrelated pickup activities.

Here is the brief description of the supported business processes:

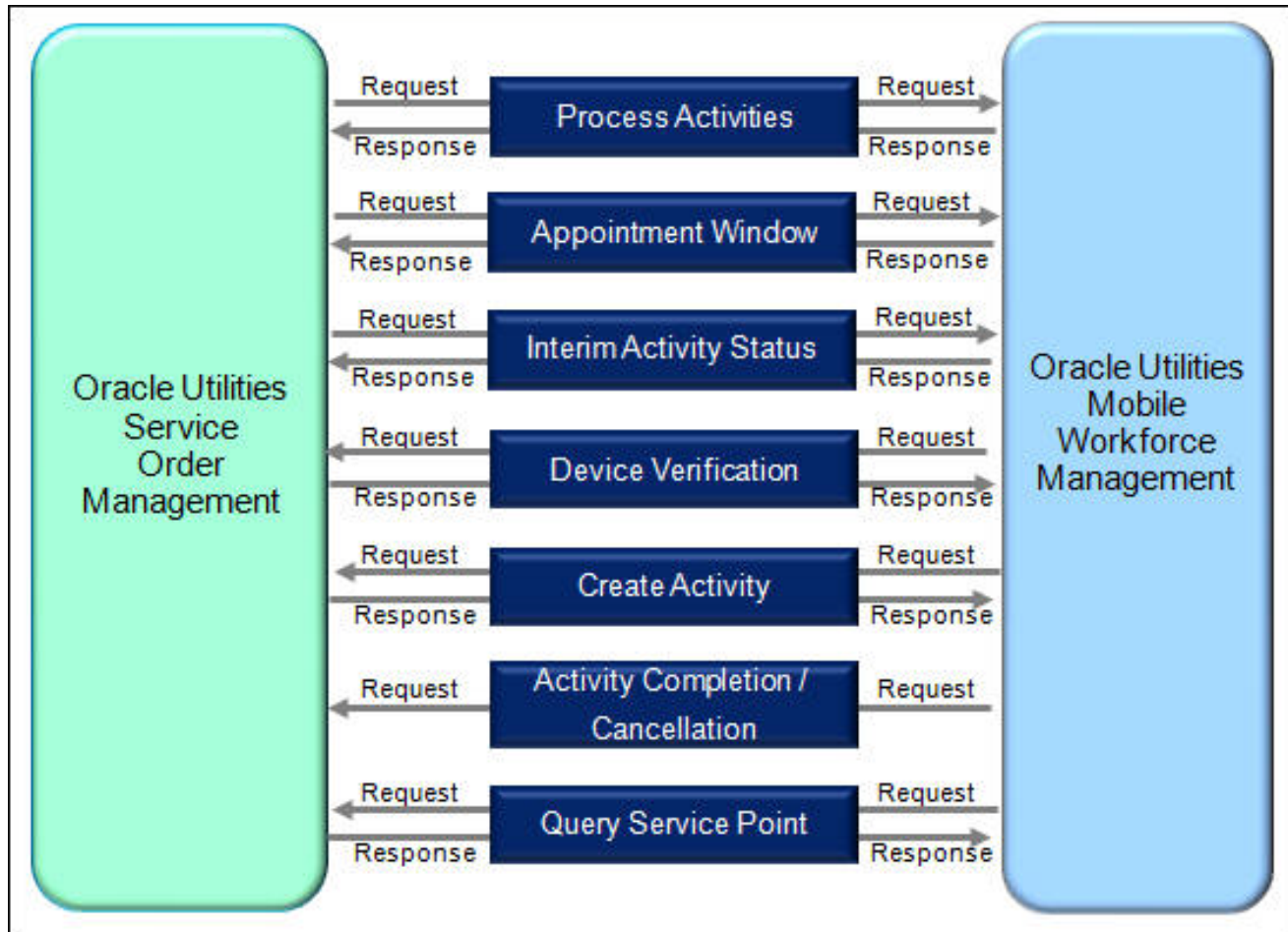
Business Process	Description
Process Activities	Oracle Utilities Service Order Management sends the details of activities that need to be created/updated/cancelled to Oracle Utilities Mobile Workforce Management. It is implemented in the <a href="#">Oracle Utilities Service Order Management Process Activities</a> integration point.
Appointment Window Request	Oracle Utilities Service Order Management requests Oracle Utilities Mobile Workforce Management for available appointment slots. Oracle Utilities Mobile Workforce Management provides a list of available appointments. It is implemented in the <a href="#">Oracle Utilities Service Order Management Appointment Window Request</a> integration point.
Interim Activity Status Request	Oracle Utilities Service Order Management requests Oracle Utilities Mobile Workforce Management for interim activity status. Oracle Utilities Mobile Workforce Management provides the status of interim activities such as work in progress or en route. It is implemented in the <a href="#">Oracle Utilities Service Order Management Activity Status</a> integration point.

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<b>Business Process</b>	<b>Description</b>
Device Verification	Oracle Utilities Mobile Workforce Management requests Oracle Utilities Service Order Management for device verification. Oracle Utilities Mobile Workforce Management provides device verification details. It is implemented in the <a href="#">Oracle Utilities Mobile Workforce Management Device Verification</a> integration point.
Create Activity	Oracle Utilities Mobile Workforce Management request Oracle Utilities Service Order Management to create activity. Oracle Utilities Service Order Management creates activity. It is implemented in the <a href="#">Oracle Utilities Mobile Workforce Management Create Activity</a> integration point.
Activity Completion / Cancellation	Oracle Utilities Mobile Workforce Management sends Activity completion/cancellation information to Oracle Utilities Service Order Management. It is implemented in the integration point.
Query Service Point	Oracle Utilities Mobile Workforce Management supplies criteria to identify a service point. in Oracle Utilities Service Order Management. It is implemented in the <a href="#">Oracle Utilities Mobile Workforce Management Query Service Point</a> integration point.

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The following diagram provides a visual representation of the business processes involved in this integration:



Integration Points

# Chapter 2

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## Understanding the Integration Process

This section outlines the overall technical overview, business processes, and specific integration points handled by the integration.

- [Technical Overview](#)
- [Integration Points](#)

### 2.1 Technical Overview

This direct integration between Oracle Utilities Mobile Workforce Management and Oracle Utilities Service Order Management uses web services to facilitate communication between the two applications.

The technical processes include the following:

- All end-to-end integration points are synchronous.
- Both Oracle Utilities Mobile Workforce Management and Oracle Utilities Service Order Management interact with the integration layer using web services.
- The integration layer is made up of BPEL composites deployed on the SOA Suite.

In Oracle Utilities Service Order Management initiated processes, outbound messages are sent and Oracle Utilities Mobile Workforce Management uses XAI inbound service to receive the messages. The success/ failure response is sent back to Oracle Utilities Service Order Management synchronously.

In Oracle Utilities Mobile Workforce Management initiated processes, outbound messages are sent and Oracle Utilities Service Order Management uses XAI inbound service to receive the messages. The success/ failure response is sent back to Oracle Utilities Mobile Workforce Management synchronously.

**Note:** The data translations are handled by Domain Value Maps (DVMs) in the integration layer. The integration processes can be customized to extend the business processes, if needed.

**Oracle Utilities Mobile Workforce Management Initiated Integration Processes**

The Oracle Utilities Mobile Workforce Management initiated integration processes include:

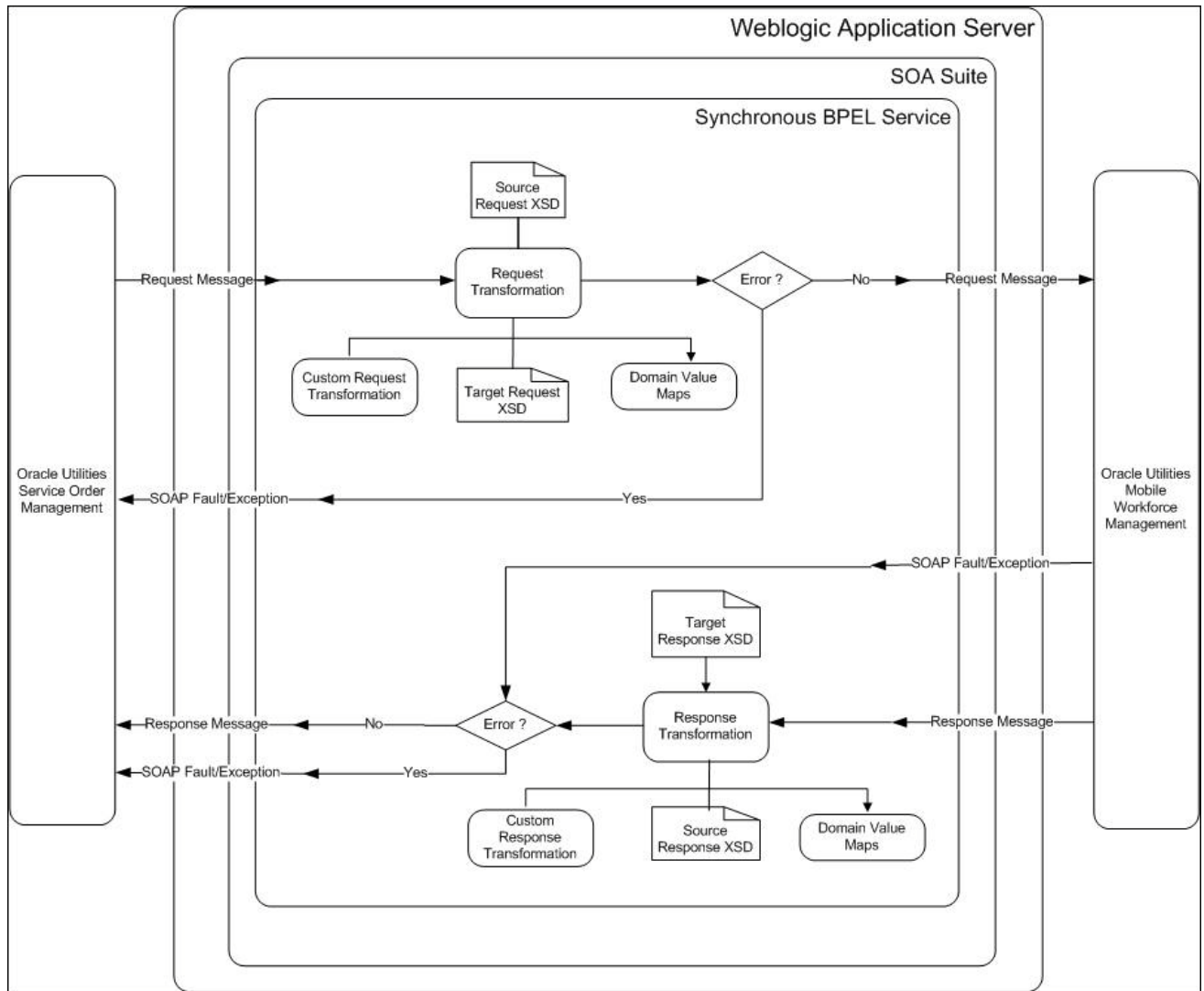
- The Oracle Utilities Mobile Workforce Management invokes the integration BPEL process using a web service call.
- The request transformation converts messages from the Oracle Utilities Mobile Workforce Management format to the Oracle Utilities Service Order Management format. The DVMs are used for data translations.
- The BPEL process invokes Oracle Utilities Service Order Management using an XAI Inbound service.
- The response transformation converts the message from the Oracle Utilities Service Order Management format back to the Oracle Utilities Mobile Workforce Management format. The DVMs are used for data translations.
- All error responses are sent back to Oracle Utilities Mobile Workforce Management. Optional, E-mail notifications are sent for business and technical failures.

**Oracle Utilities Service Order Management Initiated Integration Processes**

The Oracle Utilities Mobile Workforce Management initiated integration processes include:

- Oracle Utilities Service Order Management invokes the integration processes using a web service call.
- The request transformation converts message from the Oracle Utilities Service Order Management format to the Oracle Utilities Mobile Workforce Management format.
- The integration process invokes the Oracle Utilities Mobile Workforce Management XAI inbound service.
- The response transformation converts message from the Oracle Utilities Mobile Workforce Management format to the Oracle Utilities Service Order Management format.
- All error responses are sent back to Oracle Utilities Service Order Management. Optional, E-mail notifications are sent for business and technical failures.

The following diagram provides a graphical representation of this processing:



### Synchronous Process Diagram

The diagram illustrates synchronous request-response message exchange between Oracle Utilities Mobile Workforce Management and Oracle Utilities Service Order Management and vice-versa. The integration transforms the request message from source and the response message from target, applying custom/override transformation and domain value maps. The success or failure response is delivered to the source application.

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## 2.2 Integration Points

The integration supports the following business processes:

- [Oracle Utilities Service Order Management Process Activities](#)
- [Oracle Utilities Service Order Management Appointment Window Request](#)
- [Oracle Utilities Service Order Management Activity Status](#)
- [Oracle Utilities Mobile Workforce Management Device Verification](#)
- [Oracle Utilities Mobile Workforce Management Create Activity](#)
- [Oracle Utilities Mobile Workforce Management Activity Completion](#)
- [Oracle Utilities Mobile Workforce Management Query Service Point](#)

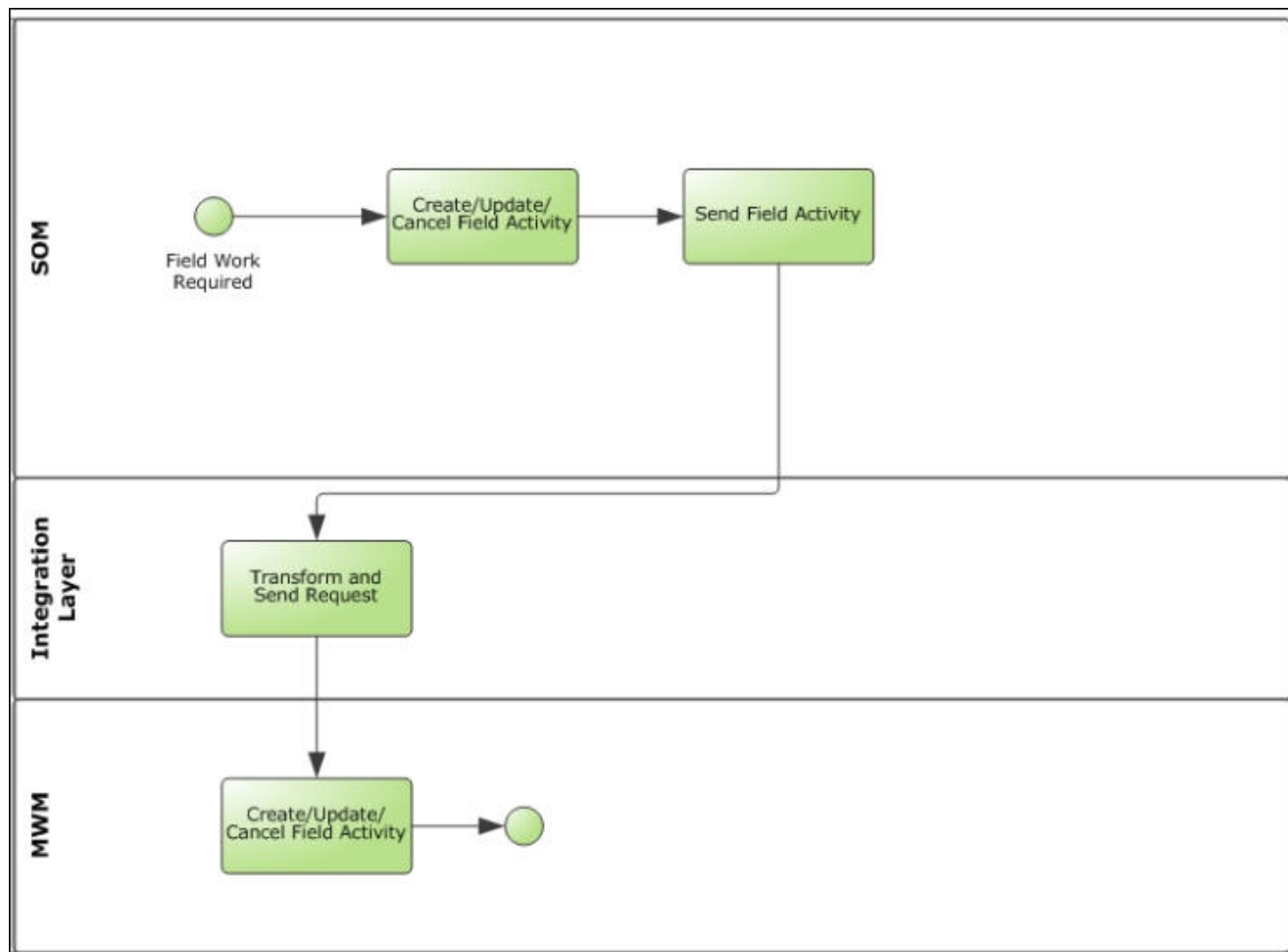
### 2.2.1 Oracle Utilities Service Order Management Process Activities

The Process Activities integration process is used to accept requests to create, update, or cancel activities in Oracle Utilities Mobile Workforce Management. All the information is sent synchronously from Oracle Utilities Service Order Management, regardless of the activity type and Oracle Utilities Mobile Workforce Management sends back a response.

If transformation or connectivity errors are encountered during processing, they are sent back to Oracle Utilities Service Order Management, and the request must be resent after the error is corrected.



The following diagram shows a graphical representation of the Process Activities integration process:



**Process Activities Business Process Diagram**

### 2.2.1.1 Business Processing

The Process Activities integration process includes the following activities:

1. Oracle Utilities Service Order Management sends the create/update/cancel activity request to integration layer by invoking a web service in the integration layer.
2. The SOMMWMProcessActivityEBF process transforms the create/update/cancel activity request message from Oracle Utilities Service Order Management, to the request message format in Oracle Utilities Mobile Workforce Management and invokes **M2-MaintainUtilityActsByHost** XAI inbound web service > **M2-MaintainUtilityActsByHost** operation.
3. Oracle Utilities Mobile Workforce Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Service Order Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Service Order

Management, and a technical fault is thrown in the integration process if the connection is not restored.

5. If there is any error in Oracle Utilities Mobile Workforce Management in processing the request sent by Oracle Utilities Service Order Management, the error message is sent to Oracle Utilities Service Order Management, and a business fault is thrown the integration process.
6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.1.2 Technical Details

This section provides details of the composites and Oracle Utilities Mobile Workforce Management services used for the Process Activities integration process.

#### Composites

Name	Description
SOMMWMPProcessActivityEBF	Composite that transforms the create/update/cancel activity request from Oracle Utilities Service Order Management to Oracle Utilities Mobile Workforce Management and replies back to Oracle Utilities Service Order Management with the appropriate response.

#### Oracle Utilities Mobile Workforce Management Inbound Services

Service Name	Description
M2-MaintainUtilityActsByHost	This XAI inbound service allows an external system to create or update a single utility activity or a group of utility activities (i.e. a 'Job').

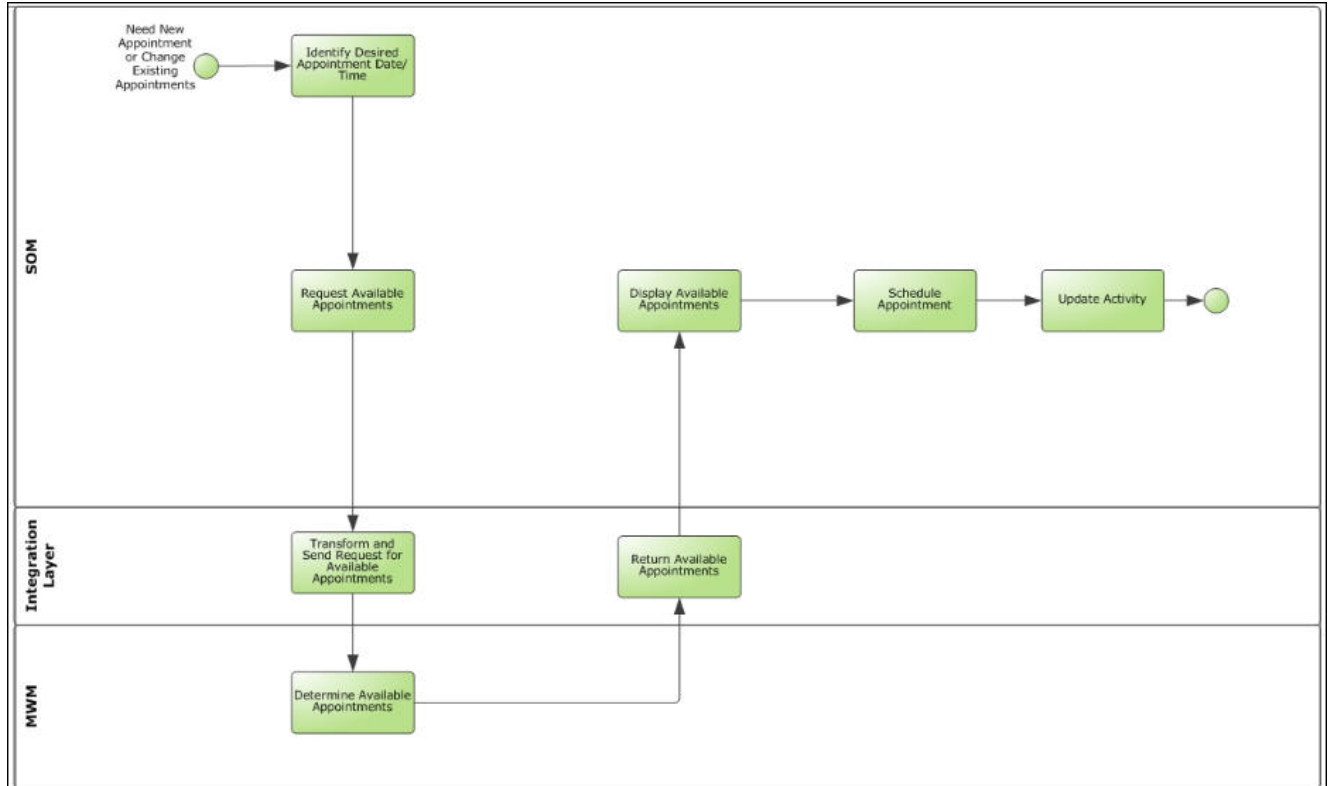
### 2.2.2 Oracle Utilities Service Order Management Appointment Window Request

The Appointment Window Request integration process provides a list of available appointments.

Oracle Utilities Service Order Management sends the activity start and end date times from the **Appointment** portal and Oracle Utilities Mobile Workforce Management sends back the list of appointments available along with the respective crew shifts details during that time window.

If transformation or connectivity errors are encountered during processing, they are sent back to Oracle Utilities Service Order Management, and the request must be resent after the error is corrected.

The following diagram shows a graphical representation of the Appointment Window Request integration process:



**Appointment Window Request Business Process Diagram**

### 2.2.2.1 Business Processing

The Appointment Window Request integration process includes the following activities:

1. Oracle Utilities Service Order Management sends the get available appointment request to integration by invoking a web service in the integration layer.
2. The SOMMWMGetAvailableApptEBF process transforms the request message from SOM to the request message format in MWM and invokes **M1-RouteAppointmentRequestToScheduler** XAI inbound web service >**M1-RouteAppointmentRequestToScheduler** operation.
3. Oracle Utilities Mobile Workforce Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Service Order Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Service Order Management and a technical fault is thrown in the integration process if the connection is not restored.
5. If there is any error in Oracle Utilities Mobile Workforce Management in processing the request sent by Oracle Utilities Service Order Management, the error message is sent to Oracle Utilities Service Order Management and a business fault is thrown the integration process.

6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.2.2 Technical Details

This section provides details of the composites and Oracle Utilities Mobile Workforce Management service used for the Appointment Window Request integration process.

#### Composites

Name	Description
SOMMWMGetAvailableApptEBF	Composite that transforms the get available appointment request from Oracle Utilities Service Order Management to Oracle Utilities Mobile Workforce Management and returns back to Oracle Utilities Service Order Management with the appropriate response.

#### Oracle Utilities Mobile Workforce Management Inbound Services

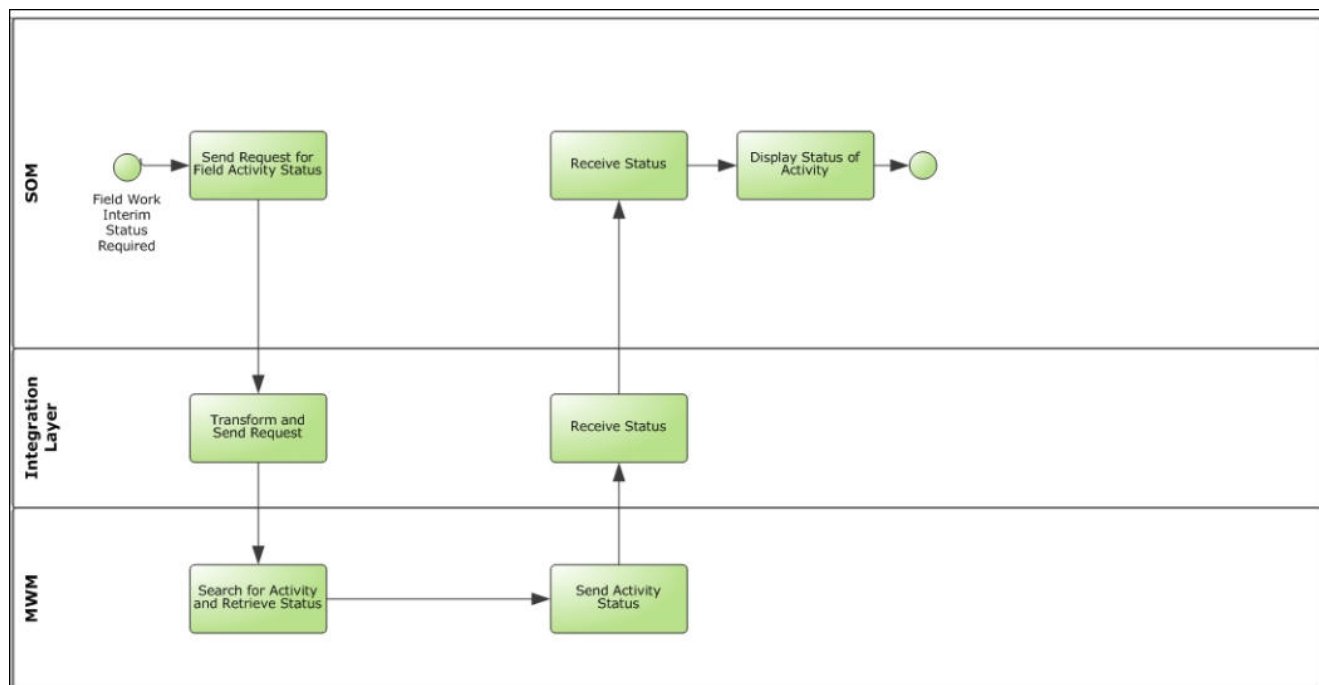
Service Name	Description
M1-RouteAppointmentRequestToScheduler	The host system uses this service to request a list of available appointment time windows for activities prior to interfacing them. Requests from the host specify the time periods for which the scheduler should return a list of available appointment windows.

### 2.2.3 Oracle Utilities Service Order Management Activity Status

The Activity Status integration process provides the intermediate status of the activities such as work in progress or en-route. Oracle Utilities Service Order Management synchronously sends the requests for the interim activity status of the field activities and Oracle Utilities Mobile Workforce Management sends back the status along with the activity details such as task type, location details, etc.

If transformation or connectivity errors are encountered during processing the inbound message, they are sent back to Oracle Utilities Service Order Management, and the request must be resent after the error is corrected.

The following diagram shows a graphical representation of the Activity Status process:



Activity Status Business Process Diagram

### 2.2.3.1 Business Processing

The artifacts for the Interim Activity Status integration process include:

1. Oracle Utilities Service Order Management sends the interim activity status request to integration layer by invoking a web service in the integration layer.
2. The SOMMWMActivityStatusEBF process transforms the request message from Oracle Utilities Service Order Management to the request message format in MWM and invokes **M1-ActivityStatusInquiry** XAI inbound web service > **M1-ActivityStatusInquiry** operation.
3. Oracle Utilities Mobile Workforce Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Service Order Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Service Order Management and a technical fault is thrown in the integration process if the connection is not restored.
5. If there is any error in Oracle Utilities Mobile Workforce Management in processing the request sent by Oracle Utilities Service Order Management, the error message is sent to Oracle Utilities Service Order Management and a business fault is thrown the integration process.
6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.3.2 Technical Details

This section provides details of the composites and Oracle Utilities Mobile Workforce Management services used for the Interim Activity Status integration process.

#### Integration Services

Name	Description
SOMMWMActivityStatusEBF	Composite that transforms the interim activity status request from Oracle Utilities Service Order Management to Oracle Utilities Mobile Workforce Management and returns back to Oracle Utilities Service Order Management with the appropriate response.

#### Oracle Utilities Mobile Workforce Management Inbound Services

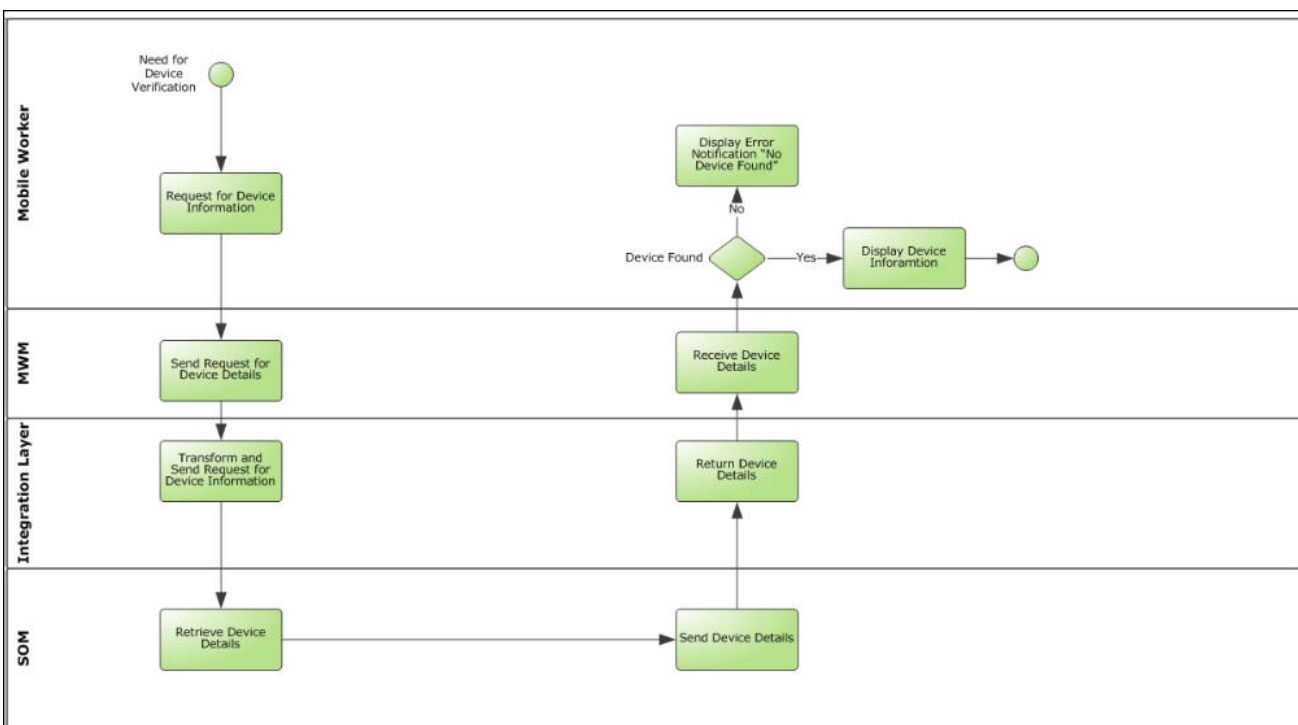
Service Name	Description
M1-ActivityStatusInquiry	External systems use this service to inquire upon the current status and details of an activity.

### 2.2.4 Oracle Utilities Mobile Workforce Management Device Verification

The Device Verification integration process is used to request verification if a specific device can be installed from Oracle Utilities Service Order Management. Oracle Utilities Mobile Workforce Management synchronously sends the requests for the device verification with device ID and Oracle Utilities Service Order Management sends back the details such as device configuration type and verification status.

If transformation or connectivity errors are encountered during processing the inbound message, they are sent back to Oracle Utilities Mobile Workforce Management, and the request must be resent after the error is corrected.

The following diagram shows a graphical representation of the Device Verification integration process:



Device Verification Business Process Diagram

### 2.2.4.1 Business Processing

The Device Verification integration process includes the following activities:

1. Oracle Utilities Mobile Workforce Management sends the device verification request to integration layer by invoking a web service in the integration layer.
2. The MWMSOMDeviceVerificationEBF process transforms the request message from Oracle Utilities Mobile Workforce Management to the request message format in Oracle Utilities Service Order Management and invokes **D1-DeviceVerificationService** XAI inbound web service > **D1-DeviceVerificationService** operation.
3. Oracle Utilities Service Order Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Mobile Workforce Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Mobile Workforce Management and a technical fault is thrown in the integration process if the connection is not restored.
5. If there is any error in Oracle Utilities Service Order Management in processing the request sent by Oracle Utilities Mobile Workforce Management, the error message is sent to Oracle Utilities Mobile Workforce Management and a business fault is thrown the integration process.
6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.4.2 Technical Details

This section provides details of the composites and Oracle Utilities Service Order Management services used for the Device Verification integration process.

#### Integration Services

Name	Description
MWMSOMDeviceVerificationEBF	Composite that transforms the device verification request from Oracle Utilities Mobile Workforce Management to Oracle Utilities Service Order Management and returns back to Oracle Utilities Mobile Workforce Management with the appropriate response.

#### Oracle Utilities Service Order Management Inbound Services

Service Name	Description
D1-DeviceVerificationService	This service determines if a device can be installed at a location.

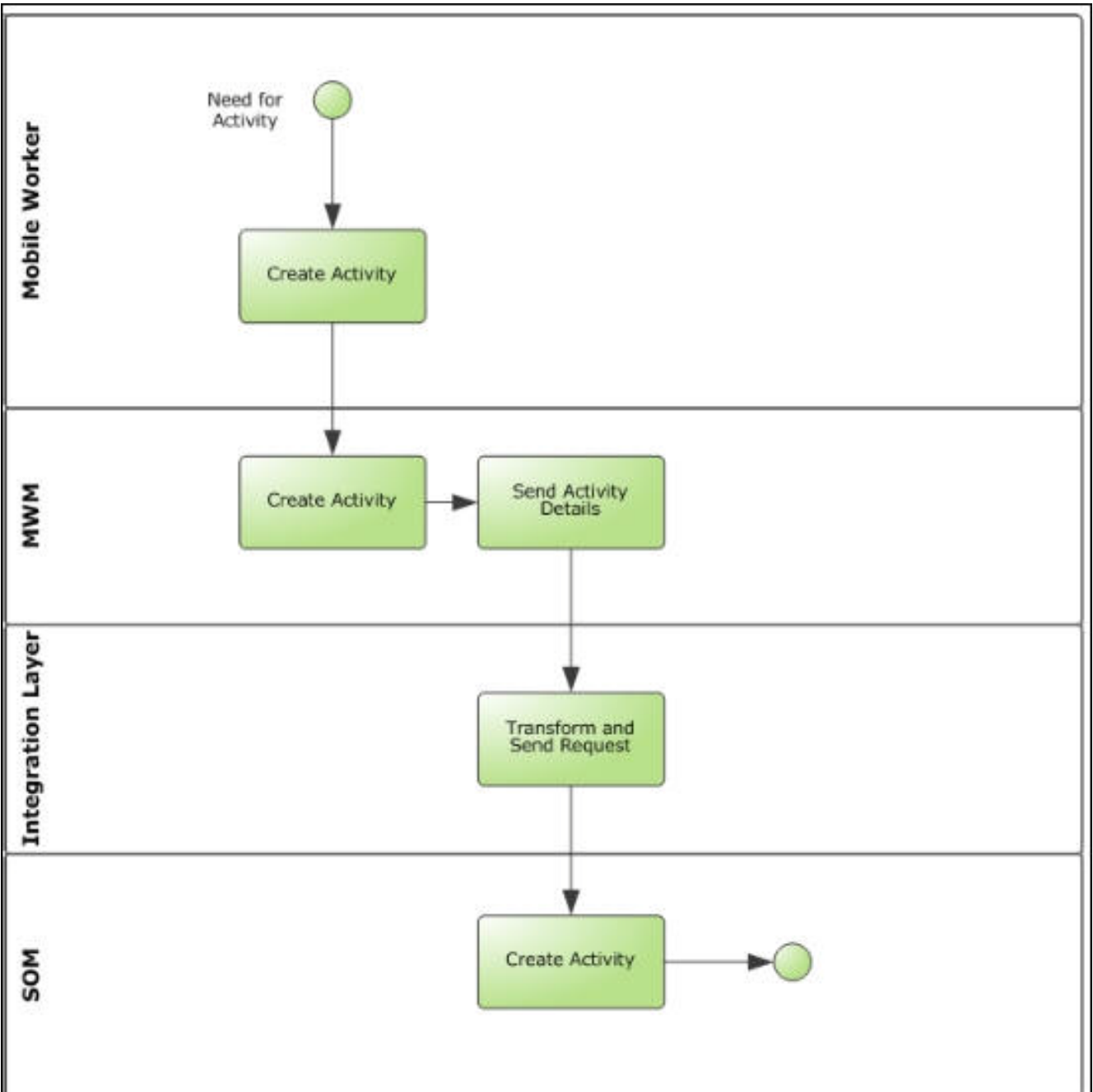
### 2.2.5 Oracle Utilities Mobile Workforce Management Create Activity

The Create Activity integration process is used to create an activity in an external system. An activity created in Oracle Utilities Mobile Workforce Management includes related/unrelated pickup activities created on the mobile device, assist activities, and ad-hoc activities. Oracle Utilities Mobile Workforce Management synchronously sends a request to create activity in Oracle Utilities Service Order Management and Oracle Utilities Service Order Management sends back the external Activity ID.

If transformation or connectivity errors are encountered during processing the inbound message, they are sent back to Oracle Utilities Mobile Workforce Management, and the request must be resent after the error is corrected.



The following diagram shows a graphical representation of the Create Activity integration process:



**Create Activity Business Process Diagram**

### 2.2.5.1 Business Processing

The Create Activity integration process includes the following activities:

1. Oracle Utilities Mobile Workforce Management sends the create activity request to integration layer by invoking a web service in the integration layer.
2. The MWMSOMCreateActivityEBF process transforms the request message from MWM to the request message format in Oracle Utilities Service Order Management

and invokes **D1-FAResultSynchronous** XAI inbound web service > **D1-FAResultSynchronous** operation.

3. Oracle Utilities Service Order Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Mobile Workforce Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Mobile Workforce Management and a technical fault is thrown in the integration process if the connection is not restored.
5. If there is any error in Oracle Utilities Service Order Management in processing the request sent by Oracle Utilities Mobile Workforce Management, the error message is sent to Oracle Utilities Mobile Workforce Management and a business fault is thrown the integration process.
6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.5.2 Technical Details

This section provides details of the composites and Oracle Utilities Service Order Management services used for the Create Activity integration process.

#### Integration Services

Name	Description
MWMSOMCreateActivityEBF	Composite that transforms the create activity request from Oracle Utilities Mobile Workforce Management to Oracle Utilities Service Order Management and returns back to Oracle Utilities Mobile Workforce Management with the appropriate response.

#### Oracle Utilities Service Order Management Inbound Services

Service Name	Description
D1-FAResultSynchronous	This service is used to process a synchronous Activity Request from an external system. Note that it is only able to accommodate add action. Update and cancel are not supported. The response includes the Oracle Utilities Service Order Management Activity ID created and external system identifiers if the request was successful. Otherwise, the response includes exception information.

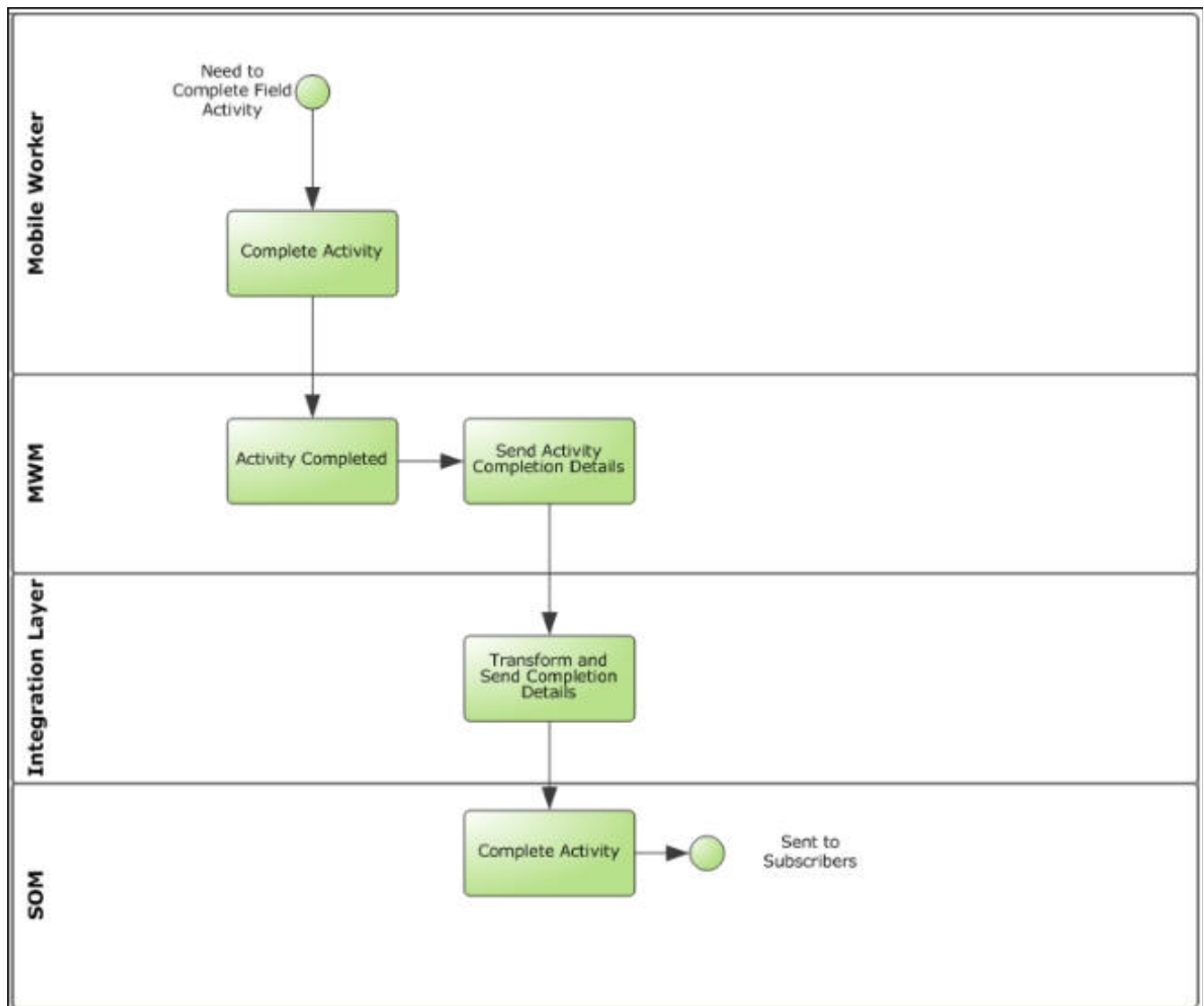
## 2.2.6 Oracle Utilities Mobile Workforce Management Activity Completion

The Activity Completion integration process is used to send the field activity completion details from Oracle Utilities Mobile Workforce Management to Oracle Utilities Service Order Management.

Oracle Utilities Mobile Workforce Management sends the activity completion details along with the completion status to Oracle Utilities Service Order Management to complete the activity in Oracle Utilities Service Order Management.

If transformation or connectivity errors are encountered during processing the inbound message, they are sent back to Oracle Utilities Mobile Workforce Management, and the request must be resent after the error is corrected.

The following diagram shows a graphical representation of the Activity Completion Integration process:



Activity Completion Business Process Diagram

### 2.2.6.1 Business Processing

The Activity Completion integration process includes the following activities:

1. Oracle Utilities Mobile Workforce Management sends the activity completion details to integration layer by invoking a web service in the integration layer.
2. The MWMSOMCompleteActivityEBF process transforms the message from Oracle Utilities Mobile Workforce Management to the message format in Oracle Utilities Service Order Management and invokes **D1-FieldActivityIBComm** XAI inbound web service > **D1-FieldActivityIBComm** operation.
3. Oracle Utilities Service Order Management sends the success or failure response to the integration.
4. In case of success response from Oracle Utilities Mobile Workforce Management, integration sends empty response message to Oracle Utilities Mobile Workforce Management.
5. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Mobile Workforce Management and a technical fault is thrown in the integration process if the connection is not restored.
6. If there is any error in Oracle Utilities Service Order Management in processing the request sent by Oracle Utilities Mobile Workforce Management, the error message is sent to Oracle Utilities Mobile Workforce Management and a business fault is thrown the integration process.

### 2.2.6.2 Technical Details

This section provides details of the composites and Oracle Utilities Service Order Management services used for the Activity Completion integration process.

#### Integration Services

Name	Description
MWMSOMCompleteActivityEBF	Composite that transforms the activity completion request from Oracle Utilities Mobile Workforce Management to Oracle Utilities Service Order Management and returns back to Oracle Utilities Mobile Workforce Management with the appropriate response.

#### Oracle Utilities Service Order Management Inbound Services

Service Name	Description
D1-FieldActivityIBComm	This service receives the Field Work system's response along with the details of what work was performed for the Field Activity. The created Inbound Communication business object handles the interpretation of the response.

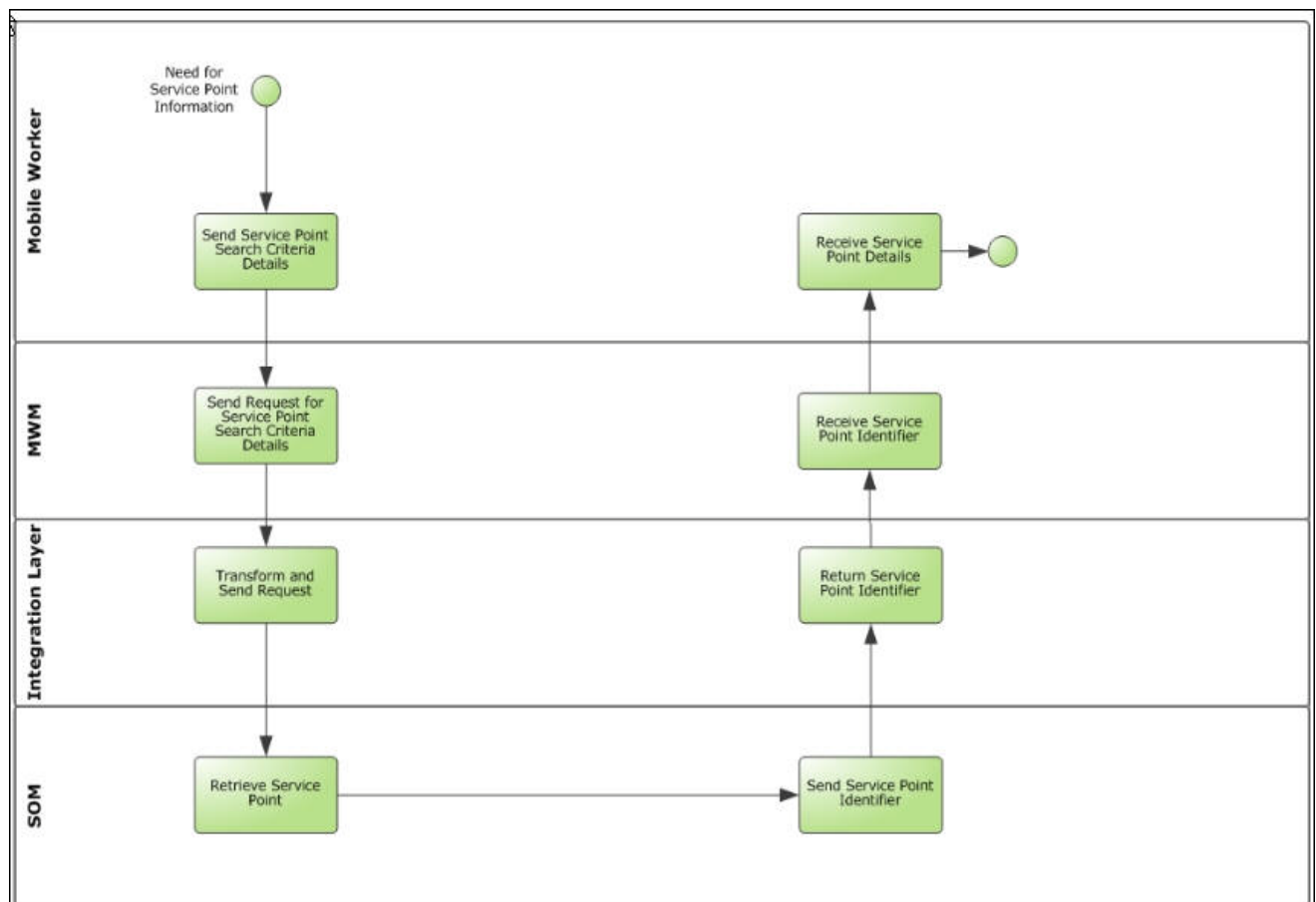
## 2.2.7 Oracle Utilities Mobile Workforce Management Query Service Point

The Query Service Point integration process is used to query the service point information.

The Oracle Utilities Mobile Workforce Management crew sends the device ID / customer name / address to Oracle Utilities Service Order Management to identify a Service Point (SP). Oracle Utilities Service Order Management performs the SP search based on the above criteria and sends a list of Service Point information back to Oracle Utilities Mobile Workforce Management.

If transformation or connectivity errors are encountered during processing the inbound message, they are sent back to Oracle Utilities Mobile Workforce Management, and the request must be resent after the error is corrected.

The following diagram shows a graphical representation of the Query Service Point integration process:



Query Service Point Business Process Diagram

### 2.2.7.1 Business Processing

The Query Service Point integration process includes the following activities:

1. Oracle Utilities Mobile Workforce Management sends the query service point request to integration layer by invoking a web service in the integration layer.
2. The MWMSOMQueryServicePointEBF process transforms the message from MWM to the message format in Oracle Utilities Service Order Management and invokes **D1-FieldWorkSPQuery** XAI inbound web service > **D1-FieldWorkSPQuery** operation.
3. Oracle Utilities Service Order Management sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Mobile Workforce Management.
4. In case of connectivity issues/remote faults, integration process retries for 3 times. The error response message is sent back to Oracle Utilities Mobile Workforce Management and a technical fault is thrown in the integration process if the connection is not restored.
5. If there is any error in Oracle Utilities Service Order Management in processing the request sent by Oracle Utilities Mobile Workforce Management, the error message is sent to Oracle Utilities Mobile Workforce Management and a business fault is thrown the integration process.
6. The e-mail notification is sent by the integration to the users based on the error notification flag configuration value.

### 2.2.7.2 Technical Details

This section provides details of the composites and services used for the Query Service Point integration process.

#### Integration Services

Name	Description
MWMSOMQueryServicePointEBF	Composite that transforms the query service point request from Oracle Utilities Mobile Workforce Management to Oracle Utilities Service Order Management and returns back to Oracle Utilities Mobile Workforce Management with the appropriate response.

#### Oracle Utilities Service Order Management Inbound Services

Service Name	Description
D1-FieldWorkSPQuery	This service provides all the service point information.

# Part 2

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## Implementing the Integration Product

This section provides details on how to configure the participating applications and middleware for this AIA direct integration. It also includes information on error handling, monitoring, customization options, and data mapping.

This section contains the following chapters:

- [Configuring the Integration](#)
- [Monitoring and Troubleshooting](#)
- [Customization Options](#)

# Chapter 3

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## Configuring the Integration

This section provides details of the configuration settings required for the integration, including:

- [Integration Configuration Checklist](#)
- [Setting up Oracle Utilities Service Order Management](#)
- [Setting Up Oracle Utilities Mobile Workforce Management](#)
- [Setting up the Process Integration](#)

### 3.1 Integration Configuration Checklist

Extensive configuration is required to implement the integration between Oracle Service Order Management and Oracle Mobile Workforce Management. For complete details, see the following sections:

- [Oracle Utilities Service Order Management Configuration Checklist](#)
- [Oracle Utilities Mobile Workforce Management Configuration Checklist](#)
- [Integration Product Configuration Checklist](#)

**Note:** Refer to the product documentation for Oracle Service Order Management and Oracle Mobile Workforce Management for the complete configuration information.

#### 3.1.1 Oracle Utilities Service Order Management Configuration Checklist

Complete the administrative data setup as needed to implement the integration. See the [Setting up Oracle Utilities Service Order Management](#) for more details.



### 3.1.2 Oracle Utilities Mobile Workforce Management Configuration Checklist

Complete the administrative data setup as needed to implement the integration. See the [Setting Up Oracle Utilities Mobile Workforce Management](#) for more details.

### 3.1.3 Integration Product Configuration Checklist

In the integration, you must configure the configuration properties file and domain value maps:

- [Setting Configuration Properties for the Integration Layer](#) - Update ConfigurationProperties.xml file. Set Module Configurations properties that are shared by multiple integration points and Service Configurations properties that are used by a specific BPEL process.
- [Setting Domain Value Maps for the Integration Layer](#)- Set Domain value maps (DVMs) to map codes and other static values across applications.

## 3.2 Setting up Oracle Utilities Service Order Management

The following sections provide details of the [Admin Data Setup](#) needed in Oracle Utilities Service Order Management to facilitate the integration.

**For more information** on configuring and working with Oracle Utilities Service Order Management, see the *Oracle Utilities Service Order Management Installation Guide* and *Configuration Guide*.

### 3.2.1 Admin Data Setup

This section describes the configuration setup for the integration:

- [Master Configuration](#)
- [Creating XAI Senders](#)
- [Creating Outbound Message Types](#)
- [Creating External Systems](#)
- [Configuring Activity Types](#)
- [Configuring External System Messages](#)
- [Configuring Control Data](#)
- [Creating Admin Objects Types](#)
- [Batch Scheduling](#)

### 3.2.1.1 Master Configuration

**Note:** [External System] denotes the name of the master configuration which is configurable by the user. The field values also can be configured in the implementation.

The master configurations are pre-populated with the necessary information to support the base objects included in the data sync.

Navigation	Field	Sample Value
Admin > M > Master Configuration > [External System] > Master Configuration Details zone		
	Field Work System	MWM External Application - Field Work System
	Completion Event Exception Handling:	<ul style="list-style-type: none"> <li>• Activity To Do Type</li> <li>• System Default Role</li> <li>• Maximum Retries 2</li> <li>• Retry Frequency: 00:05:00</li> <li>• Completion Event Expiration Days10</li> </ul>
	FA Cancellable Script	Determine FA Cancellability <ul style="list-style-type: none"> <li>• Canceled - Cancellable</li> <li>• Completed - Not Cancellable</li> <li>• Declined - Cancellable</li> <li>• Dispatched - Cancellable</li> <li>• Enroute - Not Cancellable</li> <li>• Error - Cancellable</li> <li>• On Hold - Cancellable</li> <li>• Started - Not Cancellable</li> <li>• Queued for Dispatch - Not Cancellable</li> <li>• Scheduled - Cancellable</li> <li>• Suspended - Cancellable</li> </ul>
	Management Dashboard Configuration	Default Expected Activity Completion Time (Hours) > 9
	Life Support/ Sensitive Load Option	Allow Cut Service

### 3.2.1.2 Creating XAI Senders

Create a new XAI Sender for each integration service being executed by implementing the following steps:

1. In the **Admin** menu, navigate to **X >XAI Sender+**.
2. Enter a unique XAI sender and its description.
3. Populate the following values:
  - **Invocation Type** - *Real-time*.
  - **XAI Class** - *RTHTTPSNDR* (Sender routes messages via HTTP real-time).
  - **Active** - Select the checkbox.
  - **MSG Encoding** - *UTF-8 message encoding*.
4. Select the **Context** tab and set values for the following context types:
  - **HTTP Header** - *SOAPAction:"process"*.
  - **HTTP Login User**- User ID to access Integration BPEL process.
  - **HTTP Password**- Password to access Integration BPEL process.
  - **HTTP Method (POST/GET)** - POST.
  - **HTTP Timeout** - 60.
  - **HTTP Transport Method** - SendReceive.
  - **HTTP URL 1** - Set the URL to be accessed. If the URL value does not fit, use the additional HTTP URL types to set the complete URL.

The XAI senders to be setup for the different integration points are as follows:

#### Interim Status Request

XAI Sender	Description	HTTP URL
SOM-ISREQ	SOM: Interim Status Request	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/SOMMWMActivityStatusEBF/SOMMWMActivityStatusBPEL_Client_ep

#### Request MWM Appointment

XAI Sender	Description	HTTP URL
SOM-MWMAPTRE	SOM: Request for Appointment	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/SOMMWMGetAvailableApptEBF/SOMMWMGetAvailableApptBPEL_Client_ep

**FA Creation Request**

XAI Sender	Description	HTTP URL
SOM_MWMFAReq	FA Creation Request	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/SOMMWMPProcessActivityEBF/SOMMWMPProcessActivityBPEL_Client_ep

**3.2.1.3 Creating Outbound Message Types**

Follow the steps mentioned below to create a new Outbound Message Type for each Oracle Utilities Service Order Management outbound integration service:

1. In the **Admin** menu, navigate to **O > Outbound Message Type+**.
2. Enter an outbound message type, its description, and then the detailed description.
3. Select the **Outbound Message** Business object created for the specific outbound queue.

The outbound message types to be setup for the different integration points are as follows:

Outbound Message Type	Description	Business Object
SR-RINTSTATU	SR-Request MWM Interim Status	D1-InterimStatusRequest
SR-SMWMAPPT	Appointment Request to MWM	D1-OutboundMessage
SR-SMWMOMT	SR-Send MWM Outbound Message	D1-OutboundMessage
SR-SNEGACK	SR-Send Negative Acknowledgement to External Requester	D1-FASyncReqAckMsg

**3.2.1.4 Creating External Systems**

Follow the steps below to create an external system for Oracle Utilities Service Order Management:

1. In the Admin menu, navigate to **E> External System+**.
2. Enter a unique name for the external system and its description.

For example:

**System Name** = MWM

**Description** = External System for Oracle Utilities Mobile Workforce Management System

3. Set the **Our Name in Their System** field to SOM.

4. Associate the outbound message types created to the external system. For each outbound message type, set the following:

Outbound Message Type	Field	Values
SR-RINTSTATU	Processing Method	Real-time
	XAI Sender	SOM-ISREQ
	Date/Time Format	XSD
	Message XSL	D1-ServiceRequestRequest.xsl
	Response XSL	D1-ServiceRequestResponse.xsl
SR-SMWMAPPT	Processing Method	Real-time
	XAI Sender	SOM-MWMAPTRE
	Date/Time Format	XSD
	Message XSL	D1-ServiceRequestRequest.xsl
	Response XSL	D1-ServiceRequestResponse.xsl
SR-SMWMOMT	Processing Method	Real-time
	XAI Sender	SR-OBCOMM
	Date/Time Format	XSD
	Message XSL	D1-ServiceRequestRequest.xsl
	Response XSL	D1-ServiceRequestResponse.xsl
SR-SNEGACK	Processing Method	Real-time
	XAI Sender	SOM-ISREQ
	Date/Time Format	XSD
	Message XSL	D1-Request.xsl
	Response XSL	N/A

### 3.2.1.5 Configuring Activity Types

An activity type defines the properties common to a specific type of activity. To create an activity type, perform the following steps:

1. On the Admin menu, navigate to **A > Activity Type +**.
2. Enter a task type and its description as appropriate.

The activity types include the following:

Activity Type	Description
Enable Service Type	Record Information: Business Object = Enable Service Type Related Transaction BO = Enable Service Activity Type Category = Request Orchestration Find Measurement Criteria: Field Read Option = Prorate to Service Date Prorate Fail Action = Use Field Read Search Within the Day = No Minimum Offset Days = 2 Maximum Offset Days = 2 Exception Handling: Retry Frequency 00:10:00 Maximum Retries 2
Field Activity Type	Record Information: Business Object = Field Activity Type Related Transaction BO Field Activity Activity Type Category Field Activity To Do Information: Crew Request To Do Type = Activity To Do Type Crew Request To Do Role = System Default Role Appointment To Do Type = Activity To Do Type Appointment To Do Role = System Default Role Field Cancellation To Do Type = Activity To Do Type Field Cancellation To Do Role = System Default Role Exception Handling: To Do Type = Activity To Do Type To Do Role = System Default Role Retry Frequency = 00:10:00 Maximum Retries = 2 Discard Reason = GD Discarded due to Errors
Field Activity O\B Communication Type	Record Information: Business Object = Field Activity O\B Communication Type Exception Handling: To Do Type = Outbound Communication To Do Type To Do Role = System Default Role Retry Frequency = 00:05:00 Maximum Retries = 3
Field Activity I\B Communication Type	Record Information: Business Object = Field Activity I\B Communication Type Exception Handling: To Do Type = Inbound Communication To Do Type To Do Role = System Default Role Retry Frequency = 00:05:00 Maximum Retries = 3
Device Commissioning Type	Record Information: Device Commissioning Type BO Main: Activity Expiration Days = 11 Measurement Expiration Days = 1 Exception Handling: To Do Type = Activity To Do Type To Do Role = System Default Role Retry Frequency = 00:00:02 Maximum Retries = 2

### 3.2.1.6 Configuring External System Messages

Create a new external system message entry Oracle Utilities Service Order Management by implementing the following steps:

1. On the **Admin** menu, navigate to **E > Extendable Lookup**.
2. Enter “D1-FieldTaskTypeLookup” in the **Business Object** field and click **Refresh**.
3. Click **Description** to access the lookup.
4. Click **Add** hyperlink to add a new record.
5. Enter the **External System** (the same as create above) and a description.
6. Associate the outbound message types to the correct message business object listed in the table below:

Message Type	Message Business Object
SR-Request MWM Interim Status	Request Interim Status Update Message
Appointment Request to MWM	Outbound Message for Communication BOs
SR-Send MWM Outbound Message	Outbound Message for Communication BOs
SR-Send Negative Acknowledgement to External Requester	FA Sync Request Acknowledgement Msg

### 3.2.1.7 Configuring Control Data

The lookups, extendable lookups and admin data tables control the data. They store data in 3 different formats. They hold control data used by Oracle Utilities Service Order Management to control processes. The lookups are up to 4-character codes and a description. The extendable lookups are up to 30-character code, description, and a CLOB for additional data if needed. The individual tables are probably up to 30-character codes, description, and all kinds of other control data not needed for integration. The data is translated by the integration, and is received from or passed to Oracle Utilities Mobile Workforce Management. In few cases, the Oracle Utilities Mobile Workforce Management values must match the values added in Oracle Utilities Service Order Management.

This section covers the following:

- [Configuring Lookups](#)
- [Configuring Extendable Lookups](#)
- [Configuring Admin Data Tables](#)

**Configuring Lookups**

To configure the lookups, perform the following steps:

1. On the **Admin** menu, navigate to **L > Lookup**.
2. Enter the **Field Name** from the list below, and then enter the respective values.

S.No.	Column	Description	Field Name	Guideline	Corresponding DVM
1	Action Code	Create the required action code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	SVC_REQ_CO MP_ACT_FLG	Create the action code	MWM_SOM_ ActionCode
2	Appointment Required	Create the required appointment in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1_APPOINT MENT_FLG	Create an appointment	MWM_SOM_ AppointmentRequired
3	Device Verification Status	Create the device verification status in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1_VERIFICA TION_STATU_ FLG	Create the device verification status	MWM_SOM_ DeviceVerificationStatus
4	Interim Status	Create the interim status in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	INTERIM_ STATUS_FLG	Create the interim status	MWM_SOM_ InterimStatus
5	Life Support	Create the life support code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1_LIFE_ SUPPORT_ FLG	Define life support	MWM_SOM_ LifeSupport
6	Priority	Define the required priority code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1_PRIORIT_ FLG		MWM_SOM_ Priority



**Configuring Extendable Lookups**

To configure the extendable lookups, perform the following steps:

1. On the **Admin** menu, navigate to **E > Extendable Lookup**.
2. Enter the **Business Object** from the list below and then enter the respective values.

S.No.	Column	Description	Business Object	Guideline	Corresponding DVM
1	Disconnect Location	Create the required Disconnect Location codes in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D7-ReplaceDeviceAtLocForDecomm	Create disconnect location codes	MWM_SOM_DisconnectLocation
2	Entity Names	Create the required entity names in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicate.	D1-ExternalSystemEntityLookup	Define your entity names	MWM_SOM_EntityName
3	Manufacturer	Create the required meter configuration type in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM for meter configuration type indicated.	D1-Manufacturer	Create manufacturer codes	MWM_SOM_Manufacturer
4	Meter Location	Create the required meter location code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM for meter configuration type indicated. A meter can be associated with the on-site installation location.	D1-ServiceInstructions	Define your meter location codes.	MWM_SOM_MeterLocation

S.No.	Column	Description	Business Object	Guideline	Corresponding DVM
5	Remark Code	Define the required remark code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1-FARemarkTypeLookup	Create the remark code.	MWM_SOM_RemarkCode
6	Service Instructions	Create the required service instructions code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1-ServiceInstructions	Define service instructions	MWM_SOM_ServiceInstructions
7	Service Warnings	Create the required service warnings code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1-ServiceWarnings	Define service warnings	MWM_SOM_ServiceWarnings
8	Status Reason Usage	Create the required status reason usage code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	D1-StatusReasonUsage	Define your status reason usage	MWM_SOM_StatusReasonUsage

### Configuring Admin Data Tables

These are the global data values configured in Oracle Utilities Service Order Management and can be used within the system for this integration, including:

S.No.	Column	Description	Navigation	Guideline	Corresponding DVM
1	Country	Create a country code in Oracle Utilities Service Order Management.  The <b>Main</b> page is used to customize the fields and field descriptions that are displayed where addresses are used in the system. This ensures that all addresses conform to the customary address format and conventions of the particular country you have defined.	Admin Menu > Country	Create the Country codes	MWM_SOM_Country
2	Model	Create the required model code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Model Code	Create the model code.	MWM_SOM_Model
3	Status Reason	Create the required status reason code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Status Reason	Define your status reason	MWM_SOM_StatusReason
4	Time Zone	Create the required time zone code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Time Zone	Define your time zone code	MWM_SOM_TimeZone
5	Task Type	Create the required task type code in Oracle Utilities Service Order Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Task Type	Define your task type code	SOM_MWM_TaskType

### 3.2.1.8 Creating Admin Objects Types

Create the following admin object types for completing the configuration:

- [Device Type](#)
- [Device Configuration Type](#)
- [Measuring Component Type](#)
- [Service Point Type](#)
- [Contact Type](#)

**Device Type**

Create a new admin object type by implementing the following steps:

1. In the **Admin** menu, define a **Device Type Business Object** (Smart/Manual/Item).
2. Enter a unique name for the **Device Type** and its following data:

Example:

Name = SOM-DVC-SMTR

Description = SOM-DVC-SMTR

Service Type = Electrical Service

Device Classification: Meter

Incoming Data Shift (Fallback) = Always in Local Time

Arming Required = Arming Not Required

Head-End System (Fallback) = SOM\_D8\_ITRON

Track Location = Not Tracked

3. Associate the valid Device Configuration types to the Device Configuration Type.

Example:

SOM-DC-MANUALMTR

SOM-DC-SMTR

4. Associate the valid Head-End Systems to the Head-End System.

Example: SOM\_D8\_ITRON

**Example: Device Type - Oracle Utilities Service Order Management**

Device Type/ Information	Main	Valid Device Configuration Types	Valid Head-End Systems
SOM-DVC-SMTR / Smart Meter Type	Description = SOM-DVC-SMTR Service Type = Electrical Service Device Classification: Meter Incoming Data Shift (Fallback) = Always in Local Time Arming Required = Arming Not Required Head-End System (Fallback) = SOM_D8_ITRON Track Location = Not Tracked	SOM-DC- MANUALMTR SOM-DC-SMTR	SOM_D8_ITRON

Device Type/ Information	Main	Valid Device Configuration Types	Valid Head-End Systems
SOM-DVC- MANUALMTR / Manual Meter Type	Description = SOM- DVC-MANUALMTR Service Type = Electrical Service Device Classification= Meter	SOM-DC- MANUALMTR	
SOM-ITM /Item Type	Description = SOM- ITM Service Type = Electrical Service Device Classification: Item Consumption Source = Device Type Service Quantity UOM = Kilo-Watt- Hour Device Type Service Quantity BO = Show Context MenuAverage Daily Estimated Item Consumption Track Location = Not Tracked	SOM_DVC_ITM	

### Device Configuration Type

Create a new admin object type by implementing the following steps:

- In the **Admin** menu, define a **Device Configuration Type Business Object** (Device Configuration Type/Item Configuration Type).
- Enter a unique name for the **Device Configuration Type** and its following data:  
Example:  
Name = SOM-DC-SMTR  
Description = SOM-DC-SMTR  
Service Type = Electrical Service
- Associate the valid Measuring Component Types to the Measuring Component Type with Required/Optional flag.  
Example: SOM\_SMART\_SCALAR/ Optional

**Example: Device Configuration Type - Oracle Utilities Service Order Management**

Device Configuration Type/ Information	Main	Valid Measuring Component Types
SOM-DC-SMTR / Device Configuration Type	Name = SOM-DC-SMTR Description = SOM-DC-SMTR Service Type = Electrical Service	SOM-MC-SMMTR Optional SOM_D8_ITRON_MCTYPE_ SCALAR Optional SOM_SMART_SCALAR Optional
SOM_DVC_ITM / Item Configuration Type	Description = SOM_DVC_ITM Service Type = Electrical Service	
SOM-DC-MANUALMTR / Device Configuration Type	Description = SOM-DC- MANUALMTR Service Type = Electrical Service	SOM-MC-MANUALMTR Optional

**Measuring Component Type**

Create a new admin object type by implementing the following steps:

1. In the **Admin** menu, define a **Measuring Component Type Business Object** (Register Type/Interval Type).
2. Enter a unique name for the **Measuring Component Type** and its following data:

Example:

Name = SOM\_SMART\_SCALAR

Description = SOM\_SMART\_SCALAR

Service Type = Electrical Service

Allow Negative Consumption = Allowed

Consumptive/Subtractive = Consumptive

Rollover Threshold = 5.0

Display Parcel Size = 24:00:00

Read Method = Automatic Read

3. Associate the Value Identifiers to the Value Identifier.

Example:

Measurement with UOM Kilo-Watt-Hour

**Example: Measuring Component Type - Oracle Utilities Service Order Management**

Measuring Component Type/ Information	Main	Value Identifier
SOM_SMART_SCALAR / Register Type	Name = SOM_SMART_SCALAR Description = SOM_SMART_SCALAR Service Type = Electrical Service Allow Negative Consumption = Allowed Consumptive/Subtractive = Consumptive Rollover Threshold = 5.0 Display Parcel Size = 24:00:00 Read Method = Automatic Read	Measurement with UOM Kilo-Watt-Hour

**Service Point Type**

Create a new admin object type by implementing the following steps:

1. In the **Admin** menu, define a **Service Point Type Business Object** (Service Point Type).
2. Enter a unique name for the Service Point Type and its following data:

Example:

Name = SOM\_ERES

Description = SOM\_ERES

Service Type = Electrical Service

Service Point Category = Meter

3. Associate the valid Device Types to the Device Types.

Example: SOM-DVC-MANUALMTR;SOM-DVC-SMTR

**Example: Service Point Type - Oracle Utilities Service Order Management**

Service Point Type/ Information	Main	Valid Device Types
SOM_ERES / Service Point Type	Name = SOM_ERES Description = SOM_ERES Service Type = Electrical Service Service Point Category = Meter	SOM-DVC-MANUALMTR SOM-DVC-SMTR

**Contact Type**

Create a new admin object type by implementing the following steps:

1. In the **Admin** menu, define a **Contact Type**.
2. Enter a unique name for the Contact Type and its following data.

Example:

Name = PERSON

Description = Person-Used in Integration

**Example: Contact Type - Oracle Utilities Service Order Management**

Contact Type/ Information	Main
PERSON / Contact Type	Name = PERSON Description = Person-Used in Integration

**3.2.1.9 Batch Scheduling**

The batch codes associated with products need no further setup in Oracle Utilities Service Order Management. All sync requests for all the objects being synchronized are expected to be present in the Pending state. The following section describes the general processing for the initial sync request batches.

The following batch processes are used for the Ongoing Sync requests:

Batch Code	Description
D1-SIOPE	This is the batch process to transition ongoing sync request out of the PENDING state. It is a generic batch process that is used for different sync processes. It has a couple of parameters that can be used to control which sync request BOs to process.
D1-SIOER	This is the batch process to transition ongoing sync request out of the ERROR state.

Depending on how sync requests are sent from Oracle Utilities Service Order Management, it is possible that interdependent sync requests might be received out of order. If you wish to control the order of processing the ongoing sync requests within, you can either introduce your own batch controls to replace D1-SIOPE (each batch control has the specific ongoing sync BO defaulted in the input parameter); or you can submit D1-SIOPE several times, each time specifying a different ongoing sync BO in the input parameter. Otherwise, you can let the built-in retry processing within the ongoing sync request life cycle resolve the error by running D1-SIOER.

The above also applies to processing of the meter configuration sync request from Oracle Utilities Service Order Management. Since the latter is split into several sync requests in Oracle Utilities Meter Data Management, it is possible that the MC syncs are processed before the DC sync. Any of the options already mentioned can be used to handle this scenario.



## 3.3 Setting Up Oracle Utilities Mobile Workforce Management

The following sections provide details of the [Admin Data Setup](#) needed in Oracle Utilities Mobile Workforce Management to facilitate the integration.

**For more information** on configuring and working with Oracle Utilities Mobile Workforce Management, see the Oracle Utilities Mobile Workforce Management Installation Guide and Configuration Guide.

### 3.3.1 Admin Data Setup

This section describes the configuration setup for the integration:

- [Creating XAI Senders](#)
- [Creating Outbound Message Types](#)
- [Creating External Systems](#)
- [Creating External System Messages](#)
- [Configuring Control Data](#)

#### 3.3.1.1 Creating XAI Senders

Create a new XAI Sender for each integration service being executed by implementing the following steps:

1. In the **Admin** menu, navigate to **X> XAI Sender**.
2. Enter a unique XAI sender and its description. For example, SOM\_RTCOM.
3. Populate the following values:
  - **Invocation Type** - Real-time.
  - **XAI Class** - *RTHTTPSNDR (Sender routes messages via HTTP real-time)*.
  - **Active** - Select the checkbox.
  - **MSG Encoding** - UTF-8 message encoding.
4. Select the **Context** tab and set values for the following context types:
  - **HTTP Header** - SOAPAction:"process".
  - **HTTP Login User** - User ID to access Integration BPEL process.
  - **HTTP Password** - Password to access Integration BPEL process.
  - **HTTP Method (POST/GET)** - POST.
  - **HTTP Timeout** - 60.
  - **HTTP Transport Method** - SendReceive.
  - **HTTP URL 1** - Set the URL to be accessed. If the URL value does not fit, use the additional HTTP URL types to set the complete URL.

The XAI senders that need to be setup for the different integration points are as follows:

### Complete Activity

XAI Sender	Description	HTTP URL
SOM_RTCOM	Sends Activity Completion details to Oracle Utilities Service Order Management.	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/MWMSOMCompleteActivityEBF/MWMSOMCompleteActivityBPEL_Client_ep

### Device Verification

XAI Sender	Description	HTTP URL
SOM_DEVVE	Sends Device Verification details to Oracle Utilities Service Order Management.	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/MWMSOMDeviceVerificationEBF/MWMSOMDeviceVerificationBPEL_Client_ep

### Create Activity

XAI Sender	Description	HTTP URL
SOM_NACT	Sends new activity details to Oracle Utilities Service Order Management.	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/MWMSOMCreateActivityEBF/MWMSOMCreateActivityBPEL_Client_ep

### Service Point Query

XAI Sender	Description	HTTP URL
SOM-SPQUERY	Sends SP Query information to Oracle Utilities Service Order Management	http://SOA_HOST:SOA_PORT_NO/soa-infra/services/MWM-SOM/MWMSOMQueryServicePointEBF/MWMSOMQueryServicePointBPEL_Client_ep

**Note:** The endpoint URL for the process can be obtained from the SOA Enterprise Manager. From the SOA folder in the Navigator, under **soa-infra** -> **MWM-SOM**, select the composite application. At the top of the page, click the **Test** tab. In the **Test** tab, you will see the composite application's endpoint URL.

**For more information** about configuration guidelines, see the Oracle Utilities Mobile Workforce Management documentation.

### 3.3.1.2 Creating Outbound Message Types

Create a new outbound message types for Oracle Utilities Mobile Workforce Management outbound integration to Oracle Utilities Service Order Management by implementing the following steps:

1. In the **Admin** menu, navigate to **O > Outbound Message Types**.
2. Enter a unique outbound message type and description.
3. Associate the outbound message types to the correct business object listed in the table below:

Message Type Name	Outbound Message Type Description	Business Object
SOM_RTCOM	SOM Activity Completion Details	M2-ActivityCompletionDetails
SOM_DVERI	Device Verification	M2-DeviceVerificationMessage
SOM_NACT	New Activity	M2-ActivityDataDetails
SOM_SPQRY	SOM - Service Point Query	M2-ServicePointQuery

### 3.3.1.3 Creating External Systems

Create a new external system for the integration by implementing the following steps:

1. In the **Admin** menu, navigate to **External System**.
2. Enter a unique external system and description.  
For Example:  
**Name** = SOM  
**Description** = Integration SOM
3. Set the **Our Name in Their System** field to MWM.
4. Associate the outbound message types created to the external system.  
For each outbound message type, set the following:

Outbound Message Type	Field	Values
SOM_RTCOM	Processing Method	Real-time
	XAI Sender	SOM_RTCOM
	Date/Time Format	XSD
	Message XSL	AddSOAPEnvelopeAndNamespace.xsl
	Response XSL	AddSOAPEnvelopeAndNamespace.xsl

Outbound Message Type	Field	Values
SOM_DVERI	Processing Method	Real-time
	XAI Sender	SOM_DEVVE
	Date/Time Format	XSD
	Message XSL	AddSOAPEnvelopeAndNamespace.xsl
	Response XSL	AddSOAPEnvelopeAndNamespace.xsl
SOM_NACT	Processing Method	Real-time
	XAI Sender	SOM_NACT
	Date/Time Format	XSD
	Message XSL	AddSOAPEnvelopeAndNamespace.xsl
	Response XSL	RemoveSOAPEnvelopeAndNamespace.xsl
SOM_SPQRY	Processing Method	Real-time
	XAI Sender	INT-SPQUERY
	Date/Time Format	XSD
	Message XSL	AddSOAPEnvelopeAndNamespace.xsl
	Response XSL	RemoveSOAPEnvelopeAndNamespace.xsl

### 3.3.1.4 Creating External System Messages

Create a new external system messages entry Oracle Utilities Service Order Management by implementing the following steps:

1. In the **Admin** menu, navigate to **Extendable Lookup** and select **M1-ExternalSystemMessages**. Click the *Add* hyperlink on the right side of the title bar to add a new record.
2. Enter the External System (same as create above) and a description.
3. Associate the outbound message types to the correct message business object listed in the table below:

The external system messages that need to be setup for the different integration points are as follows:

Outbound Message Type	Message Business Object
Completion	Utility Activity Completion Details Message
Pickup Order (New Activity) Outbound Message Type	New Utility Activity Message

### 3.3.1.5 Configuring Control Data

The lookups, extendable lookups and admin data tables control the data. They store data in 3 different formats. They hold control data used by Oracle Utilities Mobile Workforce Management to control processes. The lookups are up to 4-character codes and a description. The extendable lookups are up to 30-character code, description, and a CLOB for additional data if needed. The individual tables are probably up to 30-character codes, description, and all kinds of other control data not needed for integration. The data is translated by the integration, and is received from or passed to Oracle Utilities Service Order Management. In few cases, the Oracle Utilities Mobile Workforce Management values must match the values added in Oracle Utilities Service Order Management.

This section covers the following:

- [Configuring Lookups](#)
- [Configuring Extendable Lookups](#)
- [Configuring Admin Data Tables](#)

#### Configuring Lookups

To configure the lookups, perform the following steps:

1. On the **Admin** menu, navigate to **L > Lookup**.
2. Enter the **Field** Name from the list below, and then enter the respective values.

S. No.	Column	Description	Field Name	Guideline	Corresponding DVM
1	Action Code	Contains the required action codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> These lookups cannot be modified.	M2_FINALIZE_ACT_ACTION_FLG and M2_MAINTAIN_ACT_ACTION_FLG		MWM_SOM_ActionCode
2	Appointment Required	Contains the required appointment in required codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M1_APPT_REQ_FLG		MWM_SOM_AppointmentRequired

S. No.	Column	Description	Field Name	Guideline	Corresponding DVM
3	Device Verification Type	Contains the required device verification type codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_DEVICE_TYPE_FLG		MWM_SOM_ DeviceVerificationType
4	Device Verification Status	Contains the device verification status codes in Oracle Utilities Mobile Workforce Management. The codes Defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_HOST_VERIF_ STATUS_FLG		MWM_SOM_ DeviceVerificationStatus
5	Interim Status	Contains the interim status codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_INTERIM_STATUS_FLG		MWM_SOM_ InterimStatus
6	Item Status	Contains the item status codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_DEVICE_STATUS_FLG		MWM_SOM_ ItemStatus
7	Life Support	Contains the life support codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_LIFE_SUPPORT_FLG		MWM_SOM_ LifeSupport

S. No.	Column	Description	Field Name	Guideline	Corresponding DVM
8	Meter Status	Contains the meter status codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_DEVICE_STATUS_FLG		MWM_SOM_MeterStatus
9	Status Reason Usage	Create the required status reason usage code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2_STATUS_REASON_USAGE_FLG	Define your status reason usage.	MWM_SOM_StatusReasonUsage
10	Time Window Usage	Contains the time window usage code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated. <b>Note:</b> This lookup cannot be modified.	M2_STATUS_REASON_USAGE_FLG		MWM_SOM_TimeWindowUsage

### Configuring Extendable Lookups

To configure the extendable lookups, perform the following steps:

1. On the **Admin** menu, navigate to **E > Extendable Lookup**.
2. Enter the **Business Object** from the list below and then enter the respective values.

S. No.	Column	Description	Business Object	Guideline	Corresponding DVM
1	Device Configuration Type	Create the required device configuration types in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-MeterConfirugationType	Create the device configuration type.	MWM_SOM_DeviceConfigurationType
2	Disconnect Location	Create the required Disconnect Location codes. The codes defined here must exactly match values in the DVM indicated.	M2-Disconnect Location	Create the disconnect location codes.	MWM_SOM_DisconnectLocation

S. No.	Column	Description	Business Object	Guideline	Corresponding DVM
3	Manufacturer	Create the required device Manufacturer code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM for device Manufacturer code indicated.	M2-Device Manufacturer	Create manufacturer codes.	MWM_SOM_Manufacturer
4	Meter Location	Create the required meter location code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM for meter configuration type indicated. A meter can be associated with the on-site installation location.	M2-Meter Location	Define your meter location codes.	MWM_SOM_MeterLocation
5	Service Instructions	Create the required service instructions code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-Service Instructions	Define service instructions.	MWM_SOM_ServiceInstructions
6	Service Warnings	Create the required service warnings code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-Service Warnings	Define service warnings.	MWM_SOM_ServiceWarnings
7	Stock Location	Create the required stock location Codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-MeterConfirugationType StockLocation	Create the stock location codes.	MWM_SOM_StockLocation
8	Time Of Use	Create the required time of use code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-TimeOfUse	Define time of use Codes.	MWM_SOM_TOU
9	Unit of Measure	Create the required unit of measure codes in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	M2-UnitOfMeasure	Define unit of measure codes	MWM_SOM_UOM



### Configuring Admin Data Tables

These are the global data values configured in Oracle Utilities Mobile Workforce Management and can be used within the system for this integration, including:

S. No.	Column	Description	Navigation	Guideline	Corresponding DVM
1	Country	Create a country code in Oracle Utilities Mobile Workforce Management. The <b>Main</b> page is used to customize the fields and field descriptions that are displayed where addresses are used in the system. This ensures that all addresses conform to the customary address format and conventions of the particular country you have defined.	Admin Menu > Country	Create the Country codes.	MWM_SOM_Country
2	Remark Code	Define the required remark code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Remark Type	Create the remark code.	MWM_SOM_RemarkCode
3	Appointment Booking Group	Create the required appointment booking group code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Appointment Booking Group	Define your appointment booking group.	MWM_SOM_SlotGroup
4	Status Reason	Create the required status reason code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Status Reason	Define your status reason.	MWM_SOM_StatusReason

S. No.	Column	Description	Navigation	Guideline	Corresponding DVM
5	Time Zone	Create the required time zone code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Time Zone	Define your time zone code	MWM_SOM_TimeZone
6	Task Type	Create the required task type code in Oracle Utilities Mobile Workforce Management. The codes defined here must exactly match values in the DVM indicated.	Admin Menu > Task Type	Define your task type code	SOM_MWM_TaskType

## 3.4 Setting up the Process Integration

The following sections describe how to configure the integration pack to meet the requirements for a two-way integration.

Configuration steps include setting the following:

- [Setting Configuration Properties for the Integration Layer](#)
- [Setting Domain Value Maps for the Integration Layer](#)

### 3.4.1 Setting Configuration Properties for the Integration Layer

The ConfigurationProperties.xml file contains properties which can be defaulted in the integration. It also contains flags to enable extension points within the integration.

The ConfigurationProperties.xml file is located in MDS under the directory apps/MWM-SOM/AIAMetaData/config.

**Note:** Whenever the ConfigurationProperties.xml file is updated, it must be reloaded to the MDS repository so that update is reflected in applications or services which use these updated properties. Reload the SOA server by rebooting.

Two sets of configuration properties are described in this section:

- [Module Configuration:](#) The properties, which are shared by multiple integration points within this integration.
- [Service Configuration:](#) The properties, which are used by a specific process.

### 3.4.1.1 Module Configuration

The Module Configuration has application level properties, which are used by all SOA composites /integration points.

#### Module Configuration Details

Module Name	Default	Description
Default.Language.Code	ENG	This is the message category that the integration layer uses for languages.
MWM.Generic.MessageCategory	11510	This is the message category that the integration layer uses for Oracle Utilities Mobile Workforce Management error messages.
MWM.GenericBusinessException.MessageNumber	10010	This is the message number that the integration layer uses for generic Oracle Utilities Mobile Workforce Management error messages.
MWM.MessageCategoryNumber.Separator	:	This is the separator that the integration layer uses for generic Oracle Utilities Mobile Workforce Management message category.
SOM.Generic.MessageCategory	11017	This is the message category that the integration layer uses for Oracle Utilities Service Order Management error messages.
SOM.GenericBusinessException.MessageNumber	11001	This is the message number that the integration layer uses for generic Oracle Utilities Service Order Management error messages.
SOM.MessageCategoryNumber.Separator	:	This is the separator that the integration layer uses for generic Oracle Utilities Service Order Management message category.
SOA-INFRA.AuditLevel	OFF	This property needs to be set to OFF if the Audit Level is set to OFF for the BPEL processes. If the setting is OFF, then error handling does not use the composite and component instance IDs to log the error message.
ErrorHandling.GenericEmailID	ABC@oracle.com	This property is used to set the administrator email ID for the errorhandling process to send out an email in case of a critical failure where even the Errorhandling process fails.

### 3.4.1.2 Service Configuration

The Service Configuration properties are specific to the SOA composites. These are used to make changes in a specific composite behavior.

#### Service Configuration Details

Service Name	Property Name	Default / Shipped Value	Description
<b>SOMMWMProcessActivityEBF</b>	Extension.PreXformSOMToMWM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeMWM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeMWM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformMWMToSOM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	MWM.PAService.EndPoint	http://SOM_HOST:SOM_PORT_NO/ouaf/XAIAApp/xaiserver/M2-MaintainUtilityActsByHos	This is the endpoint for Process Activity service in Oracle Utilities Mobile Workforce Management.
	MWM.PAService.ServiceName	http://ouaf.oracle.com/spl/XAIXapp/xaiserver/M2-MaintainUtilityActsByHost}M2-MaintainUtilityActsByHostService	This is the service name for the Process Activity service in Oracle Utilities Mobile Workforce Management
	MWM.PAService.PortType	M2-MaintainUtilityActsByHostPort	This is the port type for the Process Activity service in Oracle Utilities Mobile Workforce Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	

Service Name	Property Name	Default / Shipped Value	Description
<b>MWMSOMDeviceVerificationEBF</b>	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	SOM.DVService.EndPoint	false	This is the endpoint for the Device Verification service in Oracle Utilities Service Order Management.
	SOM.DVService.ServiceName	http://MWM_HOST:MWM_PORT_NO/ouaf/XAIApp/xaiserver/D1-DeviceVerificationService	This is the service name for the Device Verification service in Oracle Utilities Service Order Management.
	SOM.DVService.PortType	http://ouaf.oracle.com/ouaf/XAIApp/xaiserver/D1-DeviceVerificationService}D1-DeviceVerificationServiceService	This is the port type for the Device Verification service in Oracle Utilities Service Order Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	

Service Name	Property Name	Default / Shipped Value	Description
<b>MWMSOMCreateActivityEBF</b>	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	SOM.CAService.EndPoint	http://MWM_HOST:MWM_PORT_NO/ouaf/XAIApp/xaiserver/D1-FAResultSynchronous	This is the endpoint for the Create Activity service in Oracle Utilities Service Order Management.
	SOM.CAService.ServiceName	http://ouaf.oracle.com/spl/XAIApp/xaiserver/D1-FAResultSynchronous}D1-FAResultSynchronousService	This is the service name for the Create Activity service in Oracle Utilities Service Order Management.
	SOM.CAService.PortType	D1-FAResultSynchronousPort	This is the port type for the Create Activity service in Oracle Utilities Service Order Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	

Service Name	Property Name	Default / Shipped Value	Description
<b>MWMSOMComplete ActivityEBF</b>	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	SOM.CAService.EndPoint	http:// MWM_HOST:MWM_PORT_N O/ouaf/XAIApp/xaiserver/D1- FieldActivityIBComm	This is the endpoint for the Complete Activity service in Oracle Utilities Service Order Management.
	SOM.CAService.ServiceName	http://ouaf.oracle.com/spl/ XAIApp/xaiserver/D1- FieldActivityIBComm}D1- FieldActivityIBCommService	This is the service name for the Complete Activity service in Oracle Utilities Service Order Management.
	SOM.CAService.PortType	D1-FieldActivityIBCommPort	This is the port type for the Complete Activity service in Oracle Utilities Service Order Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	

Service Name	Property Name	Default / Shipped Value	Description
<b>SOMMWMActivityStatusEBF</b>	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	SOM.ASService.EndPoint	http://SOM_HOST:SOM_PORT_NO/ouaf/XAIApp/xaiserver/M1-ActivityStatusInquiry	This is the endpoint for the Activity Status service in Oracle Utilities Service Order Management.
	SOM.ASService.ServiceName	http://ouaf.oracle.com/ouaf/XAIApp/xaiserver/M1-ActivityStatusInquiry}M1-ActivityStatusInquiry	This is the service name for the Activity Status service in Oracle Utilities Service Order Management.
	SOM.ASService.PortType	D1-FieldActivityIBCommPort	This is the port type for the Activity Status service in Oracle Utilities Service Order Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	



Service Name	Property Name	Default / Shipped Value	Description
SOMMWMGetAvailableApptEBF	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	MWM.AppointmentService.EndPoint	http://SOM_HOST:SOM_PORT_NO/ouaf/XAIApp/xaiserver/M1-RouteAppointmentRequestToScheduler	This is the endpoint for the Appointment service in Oracle Utilities Mobile Workforce Management.
	MWM.AppointmentService.ServiceName	http://ouaf.oracle.com/spl/XAIApp/xaiserver/M1-RouteAppointmentRequestToScheduler}M1-RouteAppointmentRequestToSchedulerService	This is the service name for the Appointment service in Oracle Utilities Mobile Workforce Management.
	MWM.AppointmentService.PortType	M1-RouteAppointmentRequestToSchedulerPortType	This is the port type for the Appointment service in Oracle Utilities Mobile Workforce Management.
	MWM.AppointmentService.WindowCount	100	This is the window count in Oracle Utilities Mobile Workforce Management for an appointment.
	MWM.AppointmentService.MaxCostUnit	50000	This is the maximum cost units of an appointment service in Oracle Utilities Mobile Workforce Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
	Override.Response	false	If set to true, the respective transformation file will be overridden.

Service Name	Property Name	Default / Shipped Value	Description
<b>MWMSOMQueryServicePointEBF</b>	Extension.PreXformMWMToSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PreInvokeSOM	false	If set to true, the pre transformation extension service is invoked.
	Extension.PostInvokeSOM	false	If set to true, the post transformation extension service is invoked.
	Extension.PostXformSOMToMWM	false	If set to true, the post transformation extension service is invoked.
	BusinessError.NotificationFlag	false	If set to true, business error notification is sent via Email.
	TechnicalError.NotificationFlag	false	If set to true, technical error notification is sent via Email.
	SOM.QuerySPService.EndPoint	http://MWM_HOST:MWM_PORT_NO/ouaf/XAIAApp/xaiserver/D1-FieldWorkSPQuery	This is the endpoint for the Service Point Query service in Oracle Utilities Service Order Management.
	SOM.QuerySPService.ServiceName	http://ouaf.oracle.com/spl/XAIXapp/xaiserver/D1-FieldWorkSPQuery}D1-FieldWorkSPQuery	This is the service name for the Service Point Query service in Oracle Utilities Service Order Management.
	SOM.QuerySPService.PortType	D1-FieldWorkSPQueryPortType	This is the port type for the Service Point Query service in Oracle Utilities Service Order Management.
	Override.Request	false	If set to true, the respective transformation file will be overridden.
Override.Response	false	If set to true, the respective transformation file will be overridden.	

### 3.4.2 Setting Domain Value Maps for the Integration Layer

Domain value maps (DVMs) are a standard feature of the Oracle SOA Suite which maps codes and other static values across applications.

Example: “US” and “USA”

DVMs are static in nature, though Administrators can add additional maps as needed. Transactional business processes never update DVMs - they only read from them. They are stored in XML files and cached in memory at runtime.

#### To maintain information within the domain value maps:

1. Open a browser and access the SOA Composer application.  
Example: `http://SOA_HOST:SOA_PORT_NO/soa/composer/`
2. On the SOA Composer, click the **Open** drop-down and select “Open DVM”. This displays a list of all DVM files in MDS.
3. Select the relevant DVM you wish to maintain.
4. Edit the selected DVM. The **Edit** button in the top navigation bar enables editing the DVM.
5. Once the DVM has been edited, click **Save** in the navigation bar.  
This saves the DVM data for that session.
6. Click **Commit** after updating each DVM. This saves the DVM data in MDS.

The Oracle Utilities Service Order Management -Oracle Utilities Mobile Workforce Management integration includes the following DVMs:

#### Domain Value Code Details for the Integration Points

S. No.	DVMs	Integration Points	Description
1	MWM_SOM_ActionCode	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Action Code to corresponding Oracle Utilities Service Order Management Action Code.
2	MWM_SOM_AppointmentRequired	Create Activity	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Appointment Required to corresponding Oracle Utilities Service Order Management Appointment Required.
3	MWM_SOM_Country	Create Activity, Appointment Window Request, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Country to corresponding Oracle Utilities Service Order Management Country.
4	MWM_SOM_DeviceConfigurationType	Activity Completion, Device Verification, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Configuration Type to corresponding Oracle Utilities Service Order Management Device Configuration Type.

S. No.	DVMs	Integration Points	Description
5	MWM_SOM_DeviceVerificationStatus	Device Verification	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Verification Status to corresponding Oracle Utilities Service Order Management Device Verification Status.
6	MWM_SOM_DeviceVerificationType	Device Verification	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Verification Type to corresponding Oracle Utilities Service Order Management Device Verification Type.
7	MWM_SOM_DisconnectLocation	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Disconnect Location to corresponding Oracle Utilities Service Order Management Disconnect Location.
8	MWM_SOM_EntityName	Create Activity, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Entity Name to corresponding Oracle Utilities Service Order Management Entity Name.
9	MWM_SOM_ErrorCode	Create Activity, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Error Code to corresponding Oracle Utilities Service Order Management Error Code.
10	MWM_SOM_InterimStatus	Interim Activity Status Request	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Interim Status of an activity to corresponding Oracle Utilities Service Order Management Interim Status of that activity.
11	MWM_SOM_ItemStatus	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Item Status to corresponding Oracle Utilities Service Order Management Item Status.
12	MWM_SOM_LifeSupport	Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Life Support to corresponding Oracle Utilities Service Order Management Life Support.
13	MWM_SOM_Manufacturer	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Manufacturer to corresponding Oracle Utilities Service Order Management Manufacturer.
14	MWM_SOM_MeterLocation	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Meter Location to corresponding Oracle Utilities Service Order Management Meter Location.

S. No.	DVMs	Integration Points	Description
15	MWM_SOM_MeterStatus	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Meter Status to corresponding Oracle Utilities Service Order Management Meter Status.
16	MWM_SOM_Model	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Model to corresponding Oracle Utilities Service Order Management Model.
17	MWM_SOM_Priority	Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Priority to corresponding Oracle Utilities Service Order Management Priority.
18	MWM_SOM_RemarkCode	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Remark Code to corresponding Oracle Utilities Service Order Management Remark Code.
19	MWM_SOM_ServiceInstructions	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Service Instructions to corresponding Oracle Utilities Service Order Management Service Instruction.
20	MWM_SOM_ServiceWarnings	Activity Completion, Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Service Warnings to corresponding Oracle Utilities Service Order Management Service Warnings.
21	MWM_SOM_SlotGroup	Appointment Window Request	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Slot Group to corresponding Oracle Utilities Service Order Management Slot Group.
22	MWM_SOM_StatusReason	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Status Reason to corresponding Oracle Utilities Service Order Management Status Reason.
23	MWM_SOM_StatusReasonUsage	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Status Reason Usage to corresponding Oracle Utilities Service Order Management Status Reason Usage.
24	MWM_SOM_StockLocation	Activity Completion	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Stock Location to corresponding Oracle Utilities Service Order Management Stock Location.

S. No.	DVMs	Integration Points	Description
25	MWM_SOM_TimeWindowUsage	Process Activities	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Time Window Usage to corresponding Oracle Utilities Service Order Management Time Window Usage.
26	MWM_SOM_TimeZone	Process Activities, Appointment Window Request	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Time Zone to corresponding Oracle Utilities Service Order Management Time Zone.
27	MWM_SOM_TOU	Activity Completion, Process Activities, Device Verification	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management TOU to corresponding Oracle Utilities Service Order Management TOU.
28	MWM_SOM_UOM	Activity Completion, Process Activities, Device Verification	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management UOM to corresponding Oracle Utilities Service Order Management UOM.
29	SOM_MWM_TaskType	Process Activities, Appointment Window Request	This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Task Type to corresponding Oracle Utilities Service Order Management Task Type.

**For more information** about Domain Value Maps, refer the chapters **Working with Domain Value Maps and Using SOA Composer with Domain Value Maps** in *Oracle Fusion Middleware Developer's Guide for Oracle SOA Suite*.

### 3.4.2.1 MWM\_SOM\_ActionCode

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Action Code to corresponding Oracle Utilities Service Order Management Action Code.

MWM_ActionCode	SOM_ActionCode
This is a valid Action Code defined in Oracle Utilities Mobile Workforce Management. For example, M1AD	This is a valid Action Code defined in Oracle Utilities Service Order Management. For example, D1AD

### 3.4.2.2 MWM\_SOM\_AppointmentRequired

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Appointment Required to corresponding Oracle Utilities Service Order Management Appointment Required.

MWM_AppointmentRequired	SOM_AppointmentRequired
This is a valid Appointment Required defined in Oracle Utilities Mobile Workforce Management. For example, M1YS	This is a valid Appointment Required defined in Oracle Utilities Service Order Management. For example, Y

### 3.4.2.3 MWM\_SOM\_Country

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Country to corresponding Oracle Utilities Service Order Management Country.

MWM_Country	SOM_Country
This is a valid Country defined in Oracle Utilities Mobile Workforce Management. For example, USA	This is a valid Country defined in Oracle Utilities Service Order Management. For example, US

### 3.4.2.4 MWM\_SOM\_DeviceConfigurationType

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Configuration Type to corresponding Oracle Utilities Service Order Management Device Configuration Type.

MWM_DeviceConfigurationType	SOM_DeviceConfigurationType
This is a valid Device Configuration Type defined in Oracle Utilities Mobile Workforce Management. For example, DCT-MS	This is a valid Device Configuration Type defined in Oracle Utilities Service Order Management. For example, SOM-DCT-MS

### 3.4.2.5 MWM\_SOM\_DeviceVerificationStatus

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Verification Status to corresponding Oracle Utilities Service Order Management Device Verification Status.

MWM_DeviceVerificationStatus	SOM_DeviceVerificationStatus
This is a valid Device Verification Status defined in Oracle Utilities Mobile Workforce Management. For example, M2IV	This is a valid Device Verification Status defined in Oracle Utilities Service Order Management. For example, D1IV

### 3.4.2.6 MWM\_SOM\_DeviceVerificationType

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Device Verification Type to corresponding Oracle Utilities Service Order Management Device Verification Type.

MWM_DeviceVerificationType	SOM_DeviceVerificationType
This is a valid Device Verification Type defined in Oracle Utilities Mobile Workforce Management. For example, M2MR	This is a valid Device Verification Type defined in Oracle Utilities Service Order Management. For example, d1MR

### 3.4.2.7 MWM\_SOM\_DisconnectLocation

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Disconnect Location to corresponding Oracle Utilities Service Order Management Disconnect Location.

MWM_DisconnectLocation	SOM_DisconnectLocation
This is a valid Disconnect Location defined in Oracle Utilities Mobile Workforce Management. For example, SRCE (Disconnected at source)	This is a valid Disconnect Location defined in Oracle Utilities Service Order Management. For example, SRCE (Disconnected at source)

### 3.4.2.8 MWM\_SOM\_EntityName

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Entity Name to corresponding Oracle Utilities Service Order Management Entity Name.

MWM_EntityName	SOM_EntityName
This is a valid Entity Name defined in Oracle Utilities Mobile Workforce Management. For example, M1MDMDEVICEID	This is a valid Entity Name defined in Oracle Utilities Service Order Management. For example, D1-SRDevice

### 3.4.2.9 MWM\_SOM\_ErrorCode

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Error Code to corresponding Oracle Utilities Service Order Management Error Code.

MWM_ErrorCode	SOM_ErrorCode
This is a valid Error Code defined in Oracle Utilities Mobile Workforce Management. For example, 11510:10010	This is a valid Error Code defined in Oracle Utilities Service Order Management. For example, 11017:11018

### 3.4.2.10 MWM\_SOM\_InterimStatus

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Interim Status to corresponding Oracle Utilities Service Order Management Interim Status.

MWM_InterimStatus	SOM_InterimStatus
This is a valid Interim Status defined in Oracle Utilities Mobile Workforce Management. For example, M1ER	This is a valid Interim Status defined in Oracle Utilities Service Order Management. For example, D1ER

### 3.4.2.11 MWM\_SOM\_ItemStatus

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Item Status to corresponding Oracle Utilities Service Order Management Item Status.

MWM_ItemStatus	SOM_ItemStatus
This is a valid Item Status defined in Oracle Utilities Mobile Workforce Management. For example, 1 (ON)	This is a valid Item Status defined in Oracle Utilities Service Order Management. For example, 1 (ON)

### 3.4.2.12 MWM\_SOM\_LifeSupport

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Life Support to corresponding Oracle Utilities Service Order Management Life Support.

MWM_LifeSupport	SOM_LifeSupport
This is a valid Life Support defined in Oracle Utilities Mobile Workforce Management. For example, N	This is a valid Life Support defined in Oracle Utilities Service Order Management. For example, D1N



### 3.4.2.13 MWM\_SOM\_Manufacturer

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Manufacturer to corresponding Oracle Utilities Service Order Management Manufacturer.

<b>MWM_Manufacturer</b>	<b>SOM_Manufacturer</b>
This is a valid Manufacturer defined in Oracle Utilities Mobile Workforce Management. For example, GE	This is a valid Manufacturer defined in Oracle Utilities Service Order Management. For example, GE

### 3.4.2.14 MWM\_SOM\_MeterLocation

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Meter Location to corresponding Oracle Utilities Service Order Management Meter Location.

<b>MWM_MeterLocation</b>	<b>SOM_MeterLocation</b>
This is a valid Meter Location defined in Oracle Utilities Mobile Workforce Management. For example, LEFT	This is a valid Meter Location defined in Oracle Utilities Service Order Management. For example, LEFT

### 3.4.2.15 MWM\_SOM\_MeterStatus

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Meter Status to corresponding Oracle Utilities Service Order Management Meter Status.

<b>MWM_MeterStatus</b>	<b>SOM_MeterStatus</b>
This is a valid Meter Status defined in Oracle Utilities Mobile Workforce Management. For example, 1 (ON)	This is a valid Meter Status defined in Oracle Utilities Service Order Management. For example, 1 (ON)

### 3.4.2.16 MWM\_SOM\_Model

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Model to corresponding Oracle Utilities Service Order Management Model.

<b>MWM_Model</b>	<b>SOM_Model</b>
This is a valid Model defined in Oracle Utilities Mobile Workforce Management. For example, ELECTRIC 3	This is a valid Model defined in Oracle Utilities Service Order Management. For example, ELECTRIC 3

### 3.4.2.17 MWM\_SOM\_Priority

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Priority to corresponding Oracle Utilities Service Order Management Priority.

<b>MWM_Priority</b>	<b>SOM_Priority</b>
This is a valid Priority defined in Oracle Utilities Mobile Workforce Management. For example, 10	This is a valid Priority defined in Oracle Utilities Service Order Management. For example, 10

### 3.4.2.18 MWM\_SOM\_RemarkCode

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Remark Code to corresponding Oracle Utilities Service Order Management Remark Code.

MWM_RemarkCode	SOM_RemarkCode
This is a valid Remark Code defined in Oracle Utilities Mobile Workforce Management. For example, MWM-DT	This is a valid Remark Code defined in Oracle Utilities Service Order Management. For example, SOM-DT

### 3.4.2.19 MWM\_SOM\_ServiceInstructions

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Service Instructions to corresponding Oracle Utilities Service Order Management Service Instructions.

MWM_ServiceInstructions	SOM_ServiceInstructions
This is a valid Service Instructions defined in Oracle Utilities Mobile Workforce Management. For example, LRC (Leave read card with customer)	This is a valid Service Instructions defined in Oracle Utilities Service Order Management. For example, LRC (Leave read card with customer)

### 3.4.2.20 MWM\_SOM\_ServiceWarnings

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Service Warnings to corresponding Oracle Utilities Service Order Management Service Warnings.

MWM_Service Warnings	MWM_Service Warnings
This is a valid Service Warnings defined in Oracle Utilities Mobile Workforce Management. For example, DANG (Suspect dangerous occupants)	This is a valid Service Warnings defined in Oracle Utilities Service Order Management. For example, DANG (Suspect dangerous occupants)

### 3.4.2.21 MWM\_SOM\_SlotGroup

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Slot Group to corresponding Oracle Utilities Service Order Management Slot Group.

MWM_SlotGroup	SOM_SlotGroup
This is a valid Slot Group defined in Oracle Utilities Mobile Workforce Management. For example, 3	This is a valid Slot Group defined in Oracle Utilities Service Order Management. For example, C1AL

### 3.4.2.22 MWM\_SOM\_StatusReason

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Status Reason to corresponding Oracle Utilities Service Order Management Status Reason.

MWM_StatusReason	SOM_StatusReason
This is a valid Status Reason defined in Oracle Utilities Mobile Workforce Management. For example, MWM-SR-1	This is a valid Status Reason defined in Oracle Utilities Service Order Management. For example, SOM-SR-1

### 3.4.2.23 MWM\_SOM\_StatusReasonUsage

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Status Reason Usage to corresponding Oracle Utilities Service Order Management Status Reason Usage.

MWM_StatusReason Usage	SOM_StatusReason Usage
This is a valid Status Reason Usage defined in Oracle Utilities Mobile Workforce Management. For example, M1EX	This is a valid Status Reason Usage defined in Oracle Utilities Service Order Management. For example, EXPIRED

### 3.4.2.24 MWM\_SOM\_StockLocation

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Stock Location to corresponding Oracle Utilities Service Order Management Stock Location.

MWM_StockLocation	SOM_StockLocation
This is a valid Stock Location defined in Oracle Utilities Mobile Workforce Management. For example, MAINWHSE	This is a valid Stock Location defined in Oracle Utilities Service Order Management. For example, MAINWHSE

### 3.4.2.25 MWM\_SOM\_TimeWindowUsage

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Time Window Usage to corresponding Oracle Utilities Service Order Management Time Window Usage.

MWM_TimeWindowUsage	SOM_TimeWindowUsage
This is a valid Time Window Usage defined in Oracle Utilities Mobile Workforce Management. For example, M1AR	This is a valid Time Window Usage defined in Oracle Utilities Service Order Management. For example, D1AR

### 3.4.2.26 MWM\_SOM\_TimeZone

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Time Zone to corresponding Oracle Utilities Service Order Management Time Zone.

SOM_TimeZone	SOM_TimeZone
This is a valid Time Zone defined in Oracle Utilities Mobile Workforce Management. For example, GMT	This is a valid Time Zone defined in Oracle Utilities Service Order Management. For example, GMT

### 3.4.2.27 MWM\_SOM\_TOU

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management TOU to corresponding Oracle Utilities Service Order Management TOU.

MWM_TOU	SOM_TOU
This is a valid TOU defined in Oracle Utilities Mobile Workforce Management. For example, ON	This is a valid TOU defined in Oracle Utilities Service Order Management. For example, ON

### 3.4.2.28 MWM\_SOM\_UOM

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management UOM to corresponding Oracle Utilities Service Order Management UOM.

MWM_UOM	SOM_UOM
This is a valid UOM defined in Oracle Utilities Mobile Workforce Management. For example, KW	This is a valid UOM defined in Oracle Utilities Mobile Workforce Management. For example, KW

### 3.4.2.29 SOM\_MWM\_TaskType

This DVM is used by the integration layer to map Oracle Utilities Mobile Workforce Management Task Type to corresponding Oracle Utilities Service Order Management Task Type.

MWM_TaskType	SOM_TaskType	SOM Criteria
This is a valid Task Type defined in Oracle Utilities Mobile Workforce Management. For example, SOM_CONNECTSERVICE	This is a valid Task Type defined in Oracle Utilities Service Order Management. For example, D1- ConnectSPAatSource	This is a valid criteria defined in Oracle Utilities Service Order Management. For example, SOM_SP

# Chapter 4

## Monitoring and Troubleshooting

This section discusses in details the following:

- [Monitoring from Oracle Utilities Mobile Workforce Management](#)
- [Monitoring from Oracle Utilities Service Order Management](#)
- [Monitoring from the Integration](#)
- [Troubleshooting](#)

### 4.1 Monitoring from Oracle Utilities Mobile Workforce Management

Oracle Utilities Mobile Workforce Management uses web service logs to manage error messages. Web service calls are logged in the Oracle Utilities Workforce Management WebLogic server logs:

- [Oracle Utilities Mobile Workforce Management Error Logs](#)
- [Notifications](#)
- [Connection Errors](#)

#### 4.1.1 Oracle Utilities Mobile Workforce Management Error Logs

The information about errors and warnings can be found in the log files of the WebLogic server where Oracle Utilities Mobile Workforce Management is installed.

1. Login to the machine where Oracle Utilities Mobile Workforce Management is installed.
2. The logs are stored in: `<SPLOUTPUT>/<environment>/logs/system`.

For example: `/spl/splapp/logs/system`

Many times a **Log** tab appears on an object, such as Activities and Communications. It contains the significant events that have occurred since the object was created. These events could include related objects, such as outbound messages, or error messages such as, explanations of missing configuration. More serious errors are very easy to detect by turning on Global Debug and manually advancing BO lifecycle states by pressing the appropriate button on an entity. It should fail again in a similar way, but adding information to the user log. This log is accessible when `"?debug=true"` is included in the

URL and by clicking the **Show User Log** button at the top of the page. You can control the amount of data to show by updating the value in the **Log Entries** field

**For more information** about troubleshooting Oracle Utilities Mobile Workforce Management, see the chapter “Troubleshooting and Support” in the *Oracle Utilities Mobile Workforce Management Configuration Guide*.

### 4.1.2 Notifications

When Oracle Utilities Mobile Workforce Management receives a request message from Oracle Utilities Service Order Management, it sends a response back to Oracle Utilities Service Order Management.

Exceptions typically show up as To-Do items. The Integration errors can be seen under the F1-SYNRQ and M1-MSGTH To Do Types.

### 4.1.3 Connection Errors

Information about errors can be found in the log files.

For information about error logs and their respective folders, see the section Oracle Utilities Mobile Workforce Management Error Logs.

**For more information** about errors and notifications, see the Oracle Utilities Mobile Workforce Management documentation.

## 4.2 Monitoring from Oracle Utilities Service Order Management

Oracle Utilities Service Order Management uses web service logs to manage error messages. Web service calls are logged in the Oracle Utilities Service Order Management WebLogic server logs:

- [Oracle Utilities Service Order Management Error Logs](#)
- [Notifications](#)
- [Connection Errors](#)

### 4.2.1 Oracle Utilities Service Order Management Error Logs

Many times a **Log** tab appears on errored object, such as Activities and Communications. It contains the significant events that have occurred since the object was created. These events could include related objects, such as outbound messages, or error messages such as, explanations of missing configuration. More serious errors are very easy to detect when manually advancing BO lifecycle states by pressing the appropriate button on an errored activity. It should fail again in a similar way, but adding information to the user log. This log is accessible when "?utilities=true&debug=true&tools=true" is included in the URL and by clicking the Show User Log button at the top of the page.

Sometimes it is necessary to use the Oracle Enterprise Manager to check the status of a SOA service (for instance when an activity does not complete in a reasonable time). More details can be seen by navigating to the appropriate composite and viewing the trace of the problematic instance.

**For more information** about errors and notifications, see the Oracle Utilities Service Order Management documentation.

## 4.2.2 Notifications

The exceptions typically show up as To-Do items. Other errors can be seen under the F1-OUTMS and D1-ATVTD To Do Types.

## 4.2.3 Connection Errors

Information about errors can be found in the log files.

For information about error logs and their respective folders, see the section Oracle Utilities Service Order Management Error Logs.

**For more information**, refer to the *Oracle Utilities Service Order Management Configuration Guide*.

## 4.3 Monitoring from the Integration

The section describes the utilities used to monitor the integration, use any of the following:

- [Monitoring Using WebLogic SOA Enterprise Manager](#)
- [Monitoring Using the WebLogic Logs](#)
- [Data Purge](#)

### 4.3.1 Monitoring Using WebLogic SOA Enterprise Manager

Perform the following steps to monitor using the WebLogic SOA Enterprise Manager:

1. Login to the **WebLogic SOA Server Enterprise Manager**, and then navigate to **SOA > SOA-Infra > MWM-SOM**.  
All composite processes deployed for the integration are available under the partition **MWM-SOM**.
2. Select the appropriate composite process to list all the instances for the processes sorted by time of execution. The instances also have the number of meters processed as part of the display name.
3. Click the appropriate process instance and it will display the flow for the process. The composite flow lists all activities in the process instance.

### 4.3.2 Monitoring Using the WebLogic Logs

Perform the following steps to monitor using the WebLogic logs:

1. Login to the machine where the SOA Server is installed.
2. The SOA logs are stored in: <Weblogic installation folder>/user\_projects/domains/<SOA Domain name>/servers/<SOA Server name>/logs.

For example: /slot/ems1234/oracle/Middleware/user\_projects/domains/soa\_domain/servers/soa\_server1/logs

### 4.3.3 Data Purge

To maintain maximum system integrity, the Oracle Fusion Middleware database should be purged periodically.

For information about how to complete this task, refer to the note 815896.1 on <https://support.oracle.com>.

## 4.4 Troubleshooting

At times, Oracle Utilities Service Order Management Integration to Oracle Utilities Mobile Workforce Management might experience errors or issues with connection, processing, or sending or receiving messages. Following are the common scenarios which help you to troubleshoot error, if any, and find possible solutions.

Possible Error Scenario	Resolution
Oracle Utilities Mobile Workforce Management is unable to connect to the integration layer	<p>Verify whether the integration composite endpoint URLs are configured in Oracle Utilities Mobile Workforce Management.</p> <p>Verify whether the integration layer is running, the SOA composite is deployed and it is accepting the requests.</p>
Oracle Utilities Service Order Management is unable to connect to the integration layer	<p>Verify whether the integration composite endpoints URLs are configured in Oracle Utilities Service Order Management.</p> <p>Verify whether the integration layer is running, the SOA composite is deployed and it is accepting the requests.</p>



Possible Error Scenario	Resolution
The integration is unable to connect to Oracle Utilities Mobile Workforce Management	<p>Perform the following steps:</p> <ol style="list-style-type: none"> <li>1. Check the SOA composite process to find out where the failure occurred.</li> <li>2. Verify whether or not the Oracle Utilities Mobile Workforce Management credentials are properly configured in the integration layer by logging into the enterprise manager console. <ul style="list-style-type: none"> <li>• Navigate to <b>Weblogic domain</b> &gt; <b>&lt;Domain Name&gt;</b>.</li> <li>• Right-click the <b>&lt;Domain Name&gt;</b> and select <b>Security &gt; Credentials</b>.</li> <li>• Under the credential map oracle.wsm.security, select the key <b>MWM- SOM_MWM</b>. Verify whether or not the user and password for Oracle Utilities Mobile Workforce Management are correct.</li> </ul> </li> <li>3. Verify whether the Oracle Utilities Mobile Workforce Management environment is up and running.</li> <li>4. Verify whether the Oracle Utilities Mobile Workforce Management service policies are attached in the integration composite.</li> </ol>
The integration is unable to connect to Oracle Utilities Service Order Management	<p>Perform the following steps:</p> <ol style="list-style-type: none"> <li>1. Check the SOA composite process to find out where the failure occurred.</li> <li>2. Verify whether or not the Oracle Utilities Service Order Management credentials are properly configured in the integration layer by logging into the enterprise manager console. <ul style="list-style-type: none"> <li>• Navigate to <b>Weblogic domain</b> &gt; <b>&lt;Domain Name&gt;</b>.</li> <li>• Right-click the <b>&lt;Domain Name&gt;</b> and select <b>Security &gt; Credentials</b>.</li> <li>• Under the credential map oracle.wsm.security, select the key <b>MWM- SOM_SOM</b>. Verify whether or not the Oracle Utilities Service Order Management user password is correct.</li> </ul> </li> <li>3. Verify whether the Oracle Utilities Service Order Management environment is up and running.</li> <li>4. Verify whether the Oracle Utilities Service Order Management service policies are attached in the integration composite.</li> </ol>

# Chapter 5

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## Customization Options

This chapter provides information on the various methods that can be used to extend or customize the integration, including:

- [Extension Method](#)
  - [Pre-Transformation Extension Scope](#)
  - [Pre-Invoke Extension Scope](#)
  - [Post-Invoke Extension Scope](#)
  - [Post-Transformation Extension Scope](#)
  - [Custom Transformations](#)
  - [Override Transformations](#)
  - [Steps to Implement Extension Points](#)
  - [Sample WSDL File with Binding and Service Details](#)
  - [Steps to Implement Custom Transformations](#)

### 5.1 Extension Method

The Integration Process allows extensibility of transaction messages using the following methods:

Implementers can add/implement their logic in these custom scopes of a specific composite once they login to Jdeveloper with the Customization Developer Role.

#### 5.1.1 Pre-Transformation Extension Scope

The pre-invoke extension scope is invoked before the invocation and after the main transformation is executed. This transformation aids in converting the source XML that comes in as an input to the integration process and helps the implementation to invoke external web services and/or transform the input XML.

#### 5.1.2 Pre-Invoke Extension Scope

The pre-invoke extension scope is invoked after the main transformation is executed and before the target service is invoked. This transformation aids in converting the source XML that comes in as an input to the integration process and helps the implementation to invoke external web services and/or transform the input XML.

### 5.1.3 Post-Invoke Extension Scope

The post-invoke extension scope is invoked after the target service invocation or before the response transformation is executed. This response transformation aids in converting the XML that comes in as a response from the target service to the integration process.

### 5.1.4 Post-Transformation Extension Scope

The post-transformation extension scope is invoked after the response transformation is executed. This transformation aids in converting the target XML that comes in as an input to the target service and helps the implementation to invoke external web services and/or transform the output XML.

### 5.1.5 Custom Transformations

The custom transformations are used to add data to the message in the incoming and outgoing messages.

Empty Custom transformations named "XX\_Custom.xml" are shipped with the product, which adds the new data mappings to the main transformations.

Using custom transformations enables the implementation to define and pass additional data from source system to the target system.

### 5.1.6 Override Transformations

The override transformations are used to override the message in the incoming and outgoing messages.

Override transformations named "XX\_Override\_Custom.xml" is shipped with the product, which sends the output derived from the main transformations.

Using override transformations enables the implementation to pass any data from source system to the target system.

**For more details** on customization, refer to [http://docs.tpu.ru/docs/oracle/en/fmw/11.1.1.6.0/dev.1111/e10224/bp\\_customize.htm](http://docs.tpu.ru/docs/oracle/en/fmw/11.1.1.6.0/dev.1111/e10224/bp_customize.htm).

### 5.1.7 Steps to Implement Extension Points

Each process in the integration has a pre- and post-transformation extension point which can be used to invoke Web services and transform the payload.

The desired extension point can be triggered from the process by enabling it using the ConfigurationProperties.xml pre- and post-transformation extension flags as described in the Setting Configuration Properties for the Integration Layer section.

Each process has its own concrete wsdl which is used to read the endpoint location for the extension service.

These concrete wsdl files are located in MDS under the following directories:

MWM-SOM\AIAMetaData\AIAComponents\ExtensionServiceLibrary

Steps to implement extension points are as follows:

1. Update the concrete wsdl file to define the binding and service details for the extension service to be called and move the concrete wsdl file to MDS. See the sample below.
2. Update the appropriate wsdl in the product install home to move the updated concrete wsdl to MDS. The directories to put the concrete wsdl in product install home are the following:
  - \$PRODUCT\_HOME/MDS-Artifacts/MWM-SOM/AIAMetaData/AIAComponents/ExtensionServiceLibrary
3. Deploy the concrete wsdl to MDS by running the ant deploy command for Deploying MDS folder.

**For more information** about the command to use to deploying to MDS, see Deploying MDS Folder section in the *Oracle Utilities Mobile Workforce Management Integration to Oracle Utilities Service Order Management Installation Guide*.

4. After deploying the files to MDS, restart the SOA server.
5. After restarting the SOA server, the extension point invokes the Web service in the concrete WSDL.

## 5.1.8 Sample WSDL File with Binding and Service Details

Here is the sample WSDL file with binding and service details:

Example: To enable the extension points for MWMSOMCompleteActivityExtension, add the binding and service elements to the MWMSOMCompleteActivityExtensionConcrete.wsdl

```
<binding name="MWMSOMCompleteActivityExtensionServiceSOAPBinding"
type="tns:MWMSOMCompleteActivityExtensionService">
<soap:binding style="document" transport="http://schemas.xmlsoap.org/soap/
http"/>
<operation name="PreXformMWMToSOM">
<soap:operation style="document"
soapAction="http://xmlns.oracle.com/MWM-SOM/MWMSOMCompleteActivityEBF/
MWMSOMCompleteActivityExtn/PreXformMWMToSOM"/>
<input>
<soap:body use="literal" parts="PreXformMWMToSOM"/>
</input>
<output>
<soap:body use="literal" parts="PreXformMWMToSOM"/>
</output>
</operation>
<operation name="PostXformSOMToMWM">
<soap:operation style="document"
soapAction="http://xmlns.oracle.com/MWM-SOM/MWMSOMCompleteActivityEBF/
MWMSOMCompleteActivityExtn/PostXformSOMToMWM"/>
<input>
<soap:body use="literal" parts="PostXformSOMToMWM"/>
</input>
<output>
<soap:body use="literal" parts="PostXformSOMToMWM"/>
</output>
</operation>
<operation name="PreInvokeSOM">
<soap:operation style="document"
soapAction="http://xmlns.oracle.com/MWM-SOM/MWMSOMCompleteActivityEBF/
MWMSOMCompleteActivityExtn/PreInvokeSOM"/>
<input>
<soap:body use="literal" parts="PreInvokeSOM"/>
</input>
<output>
<soap:body use="literal" parts="PreInvokeSOM"/>
</output>
</operation>
```

```

<operation name="PostInvokeSOM">
<soap:operation style="document"
soapAction="http://xmlns.oracle.com/MWM-SOM/MWMSOMCompleteActivityEBF/
MWMSOMCompleteActivityExtn/PostInvokeSOM"/>
<input>
<soap:body use="literal" parts="PostInvokeSOM"/>
</input>
<output>
<soap:body use="literal" parts="PostInvokeSOM"/>
</output>
</operation>
</binding>
<service name="MWMSOMCompleteActivityExtensionService">
<port name="MWMSOMCompleteActivityExtensionServicePort"
binding="tns:MWMSOMCompleteActivityExtensionServiceSOAPBinding">
<soap:address location=" endpoint url of the extension service "/>
</port>
</service>

```

**Note:** The binding and service can be added easily using the Oracle Jdeveloper 11g.

### 5.1.9 Steps to Implement Custom Transformations

Each process in the integration has its own XSD file. The messages have custom elements which can be used to pass additional data from one application to another or vice versa. Refer to message mappings to see the location of customElements in each message.

Each XSD has a corresponding CustomType xsd file in which the complexType elements for each customElements tag are defined.

Each process uses two XSD files, one for the Oracle Utilities Customer Care and Billing message and one for the Oracle Utilities Service Order Management message.

Perform the following steps to implement the custom transformation:

1. To pass additional elements in the customElements tag, the corresponding complexType needs to be modified. Add the additional elements required in both complexType elements i.e. xsd for both edge applications.

Each process has a main transformation which invokes custom templates. Each main transformation file has a corresponding custom XSL and custom templates are defined in the custom XSL.

These custom templates are invoked at the location where each customElements tag is present.

The custom XSL can be modified to add transformation for the newly added elements in custom XSD files.

The custom XSD files are located in product install home under the following directories:

- MWM-SOM/MDS-Artifacts/MWM-SOM/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUMWM/V2/schemas
- MWM-SOM /MDS-Artifacts/ MWM-SOM/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUSOM/V2/schemas

The custom XSL files are located in product install home under the directory: MWM-SOM/services/industry/Utilities/EBF/<Process Name>/xsl

2. After updating the XSD and XSL files in the product install home, update MDS using the ant deploy command for Deploying MDS folder.

**For more information** about the command to use to deploying to MDS, see the Deploying MDS Folder section in *Oracle Utilities Mobile Workforce Management Integration to Oracle Utilities Service Order Management Installation Guide*.

3. After deploying the files to MDS, restart the SOA server.

After restarting the SOA server, the changes to the custom xsd and xsl are reflected in the integration.

In OUSOMCreateActivityCustomType.xsd, add the *distMethod* element to the schema. This xsd file is located in MWM-SOM/MDS-Artifacts/MWM-SOM/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUSOM/V2/schemas folder.

```
<xsd:complexType name=" RequestCustomType ">
  <xsd:sequence>
    <xsd:element name=" permanentAddressConstituents" >
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name="country" type="xsd:string"
            minOccurs="0" />
          <xsd:element name="postal" type="xsd:string" minOccurs="0" />
          <xsd:element name="address1" type="xsd:string"
            minOccurs="0" />
          <xsd:element name="address2" type="xsd:string"
            minOccurs="0" />
          <xsd:element name="address3" type="xsd:string"
            minOccurs="0" />
          <xsd:element name="address4" type="xsd:string"
            minOccurs="0" />
          <xsd:element name="city" type="xsd:string" minOccurs="0" />
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

4. In OUMWMCCreateActivityRequestCustomType.xsd, add the *distributionMethod* element in the schema. This xsd file is located in MWM-SOM/MDS-Artifacts/MWM-SOM/AIAMetaData/AIAComponents/ApplicationObjectLibrary/OUMWM/V2/schemas folder.

```
<xsd:complexType name=" RequestCustomType ">
  <xsd:sequence>
    <xsd:element name=" completionStatus " >
      <xsd:complexType>
        <xsd:sequence>
          <xsd:element name=" completionStatus2" type="xsd:string"
            minOccurs="0" />
        </xsd:sequence>
      </xsd:complexType>
    </xsd:element>
  </xsd:sequence>
</xsd:complexType>
```

5. Transformation Xform\_MWMCARReq\_To\_SOMCARReq\_Custom.xsl

```
<xsl:template name="Request_CustomElements">
  <!-- transform custom elements -->
  < completionStatus xmlns=" http://oracle.com/D1- FAREquestSynchronous.xsd">
    <xsl:value-of select="responseDetail/message/completionStatus2" />
  </ completionStatus>
</xsl:template?>
```

# Appendix A

---

## Data Mapping

This section provides mapping details for each integration point. They are as follows:

- [Device Verification](#)
- [FA Completion](#)
- [Create Activity](#)
- [Activity Status](#)
- [Appointment Window](#)
- [Process Activities](#)
- [Query Service Point](#)

# Device Verification

This section provides data mapping details for the following:

- [Device Verification Request](#)
- [Device Verification Response](#)

## Device Verification Request

Device Verification Request mapping details are as shown in the table below:

Oracle Utilities Mobile Workforce Management Device Verification Request Message			Oracle Utilities Service Order Management Device Verification Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
			D1-DeviceVerificationService		OutermostTag			
requestMessage		OutermostTag	requestMessage		Group			
deviceFlag	requestMessage	Field	deviceFlag	requestMessage	Field	MWM_SOM_DeviceVerificationType.dvm	MWM_DeviceFlag	SOM_DeviceVerificationType
badgeNumber	requestMessage	Field	badgeNumber	requestMessage	Field			
servicePointId	requestMessage	Field	servicePointId	requestMessage	Field			
language	requestMessage	Field	language	requestMessage	Field			



## Device Verification Response

Device Verification Response mapping details are as shown in the table below:

Oracle Utilities Service Order Management Device Verification Response			Oracle Utilities Mobile Workforce Management Device Verification Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Columns	Oracle Utilities Service Order Management Column
responseMessage		OutermostTag						
response	responseMessage	Group	responseMessage		Group			
verificationStatus	responseMessage/ response	Field	verificationStatus	responseMessage	Field	MWM_SOM_ DeviceVerification Status.dvm	MWM_ VerificationStatus	SOM_ VerificationStatus
meterConfiguration Type	responseMessage/ response	Field	meterConfiguration Type	responseMessage	Field	MWM_SOM_ DeviceConfiguration Type.dvm	MWM_Device ConfigurationType	SOM_Device ConfigurationType
errorCode	responseMessage/ response	Field	errorCode	responseMessage	Field			
errorText	responseMessage/ response	Field	errorText	responseMessage	Field			
readingDetails	responseMessage/ response	Group	readingDetails	responseMessage	Group			
readingDetailsList	readingDetails	List	readingDetailsList	readingDetails	List			
readSequence	readingDetailsList	Field	readSequence	readingDetailsList	Field			
unitOfMeasure	readingDetailsList	Field	unitOfMeasure	readingDetailsList	Field	MWM_SOM_ UOM.dvm	MWM_UOM	SOM_UOM
timeOfUse	readingDetailsList	Field	timeOfUse	readingDetailsList	Field	MWM_SOM_ TOU.dvm	MWM_TOU	MWM_TOU
numberOfDials	readingDetailsList	Field	numberOfDials	readingDetailsList	Field			
numberOfDecimals	readingDetailsList	Field	numberOfDecimals	readingDetailsList	Field			
upperLimit	readingDetailsList	Field	upperLimit	readingDetailsList	Field			

Oracle Utilities Service Order Management Device Verification Response			Oracle Utilities Mobile Workforce Management Device Verification Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Columns	Oracle Utilities Service Order Management Column
lowerLimit	readingDetailsList	Field	lowerLimit	readingDetailsList	Field			
Reading	readingDetailsList	Field	Reading	readingDetailsList	Field			
overrideReading	readingDetailsList	Field	overrideReading	readingDetailsList	Field			

## FA Completion

This section provides data mapping details for FA completion:

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
			D1-FieldActivityIBComm		OutermostTag			
			responseDetail		Group			
message		OutermostTag	message	responseDetail	Group			
hostExternalId	message	Field	hostExternalId	message	Field			
taskId	message	Field	EMPTY TEMPLATE to blank out field					
completionStatus	message	Field	completionStatus	message	Field	MWM_SOM_ActionCode.dvm	MWM_ActionCode	SOM_ActionCode
taskType	message	Field	taskType	message	Field	MWM_SOM_FieldTaskType.dvm	MWM_TaskType	SOM_FieldTaskType

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
completedByCrew	message	Field	completedByCrew	message	Field	MWM_SOM_Worker.dvm	MWM_Worker	SOM_Worker
disconnectLocation	message/ utilityCompletionInformation/ servicePointCompletionDetails	Field	DisconnectLocation	message/ utilityCompletionInformation/ servicePointCompletionDetails	Field	MWM_SOM_DisconnectLocation.dvm	MWM_DisconnectLocation	SOM_DisconnectLocation
serviceInstructions	message/ utilityCompletionInformation/ servicePointCompletionDetails/ servicePointDataDetails	Field	serviceInstructions	message/ utilityCompletionInformation/ servicePointCompletionDetails/ servicePointDataDetails	Field	MWM_SOM_ServiceInstructions.dvm	MWM_ServiceInstructions	SOM_ServiceInstruction
serviceWarnings	message/ utilityCompletionInformation/ servicePointCompletionDetails/ servicePointDataDetails	Field	serviceWarnings	message/ utilityCompletionInformation/ servicePointCompletionDetails/ servicePointDataDetails	Field	MWM_SOM_ServiceWarnings.dvm	MWM_ServiceWarnings	SOM_ServiceWarnings
statusReasonUsage	message/ completionInformation	Field	statusReasonUsage	message/ completionInformation	Field	MWM_SOM_StatusReasonUsage.dvm	MWM_StatusReasonUsage	SOM_StatusReasonUsage
statusReason	message	Field	status Reason	message	Field	MWM_SOM_StatusReason.dvm	MWM_StatusReasonUsage	SOM_StatusReasonUsage
remarkTypes	message/ completionInformation/ remarkTypes	List	remarkTypes	message/ completionInformation/ remarkTypes	List	MWM_SOM_RemarkCode.dvm	MWM_RemarkCode	SOM_RemarkCode

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
For message/ utilityCompletionIn formation/ newDevice and message/ utilityCompletionIn formation/ existingDevice		Field			Field			
deviceStatusLeft	meterCompletionDetails	Field	deviceStatusLeft	meterCompletionDetails	Field	MWM_SOM_ MeterStatus.dvm	MWM_MeterStatus	SOM_DeviceStatus
stockLocation	meterCompletionDetails	Field	stockLocation	meterCompletionDetails	Field	MWM_SOM_ StockLocation. dvm	MWM_ StockLocation	SOM_StockLocation
deviceManufacturer	meterCompletionDetails/ meterDataDetails	Field	deviceManufacturer	meterCompletionDetails/ meterDataDetails	Field	MWM_SOM_ Manufacturer. dvm	MWM_ Manufacturer	SOM_Manufacturer
deviceModel	meterCompletionDetails/ meterDataDetails	Field	deviceModel	meterCompletionDetails/ meterDataDetails	Field	MWM_SOM_ Model.dvm	MWM_Model	SOM_Model
meterConfiguration Type	meterCompletionDetails/ meterDataDetails	Field	meterConfiguration Type	meterCompletionDetails/ meterDataDetails	Field	MWM_SOM_ DeviceConfigura tionType.dvm	MWM_ DeviceConfiguration Type	SOM_ DeviceConfiguration Type
meterLocation	meterCompletionDetails/ meterDataDetails	Field	meterLocation	meterCompletionDetails/ meterDataDetails	Field	MWM_SOM_M eterLocation. dvm	MWM_ MeterLocation	SOM_MeterLocation
timeOfUse	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field	timeOfUse	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field	MWM_SOM_ TOU.dvm	MWM_TOU	SOM_TOU

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
unitOfMeasure	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field	unitOfMeasure	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field	MWM_SOM_ UOM.dvm	MWM_UOM	SOM_UOM
overrideReading	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field	overrideReading	meterCompletionDetails/ readingCompletionDetails /readingDetails/ readingDetailsList	Field			
deviceStatusLeft	itemCompletionDetails	Field	deviceStatusLeft	itemCompletionDetails	Field	MWM_SOM_ ItemStatus.dvm	MWM_ItemStatus	SOM_DeviceStatus
stockLocation	itemCompletionDetails	Field	stockLocation	itemCompletionDetails	Field	MWM_SOM_ StockLocation. dvm	MWM_ StockLocation	SOM_StockLocation
deviceManufacturer	itemCompletionDetails/ itemDataDetails	Field	deviceManufacturer	itemCompletionDetails/ itemDataDetails	Field	MWM_SOM_ Manufacturer. dvm	MWM_ Manufacturer	SOM_Manufacturer
deviceModel	itemCompletionDetails/ itemDataDetails	Field	deviceModel	itemCompletionDetails/ itemDataDetails	Field	MWM_SOM_ Model.dvm	MWM_Model	SOM_Model
meterConfiguration Type	meterCompletionDetails/ meterDataDetails/ meterConfigurationType	Field	meterConfiguration Type	meterCompletionDetails/ meterDataDetails/ meterConfigurationType	Field	MWM_SOM_ DeviceConfigura tionType.dvm	MWM_ DeviceConfiguration Type	SOM_ DeviceConfiguration Type
meterConfiguration Type	meterCompletionDetails/ verificationDetails / response/ meterConfigurationType	Field	meterConfiguration Type	meterCompletionDetails/ verificationDetails/ response/ meterConfigurationType	Field	MWM_SOM_ DeviceConfigura tionType.dvm	MWM_ DeviceConfiguration Type	SOM_ DeviceConfiguration Type
For new device								

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
message/ utilityCompletionIn formation/ newDevice/ meterCompletionD etails/ deviceStatusLeft								
deviceStatusLeft	meterCompletionDetails/ deviceStatusLeft	Field	deviceStatusLeft	utilityCompletionInforma tion / newDevice / meterCompletionDetails / deviceStatusLeft	Field	MWM_SOM_ MeterStatus.dvm	MWM_MeterStatus	SOM_DeviceStatus
stockLocation	message/ utilityCompletionInforma tion/ newDevice/ itemCompletionDetails/ stockLocation	Field	stockLocation	utilityCompletionInforma tion/ newDevice/ itemCompletionDetails/ stockLocation	Field	MWM_SOM_ StockLocation. dvm	MWM_ StockLocation	SOM_StockLocation
deviceManufacturer	message/ utilityCompletionInforma tion/ newDevice/ itemCompletionDetails/ itemDataDetails/ deviceManufacturer	Field	deviceManufacturer	message/ utilityCompletionInforma tion/ newDevice/ itemCompletionDetails/ itemDataDetails/ deviceManufacturer	Field	MWM_SOM_ Manufacturer. dvm	MWM_ Manufacturer	SOM_Manufacturer
deviceModel	message/ utilityCompletionInforma tion/newDevice/ itemCompletionDetails/ itemDataDetails/ deviceModel	Field	deviceModel	message/ utilityCompletionInforma tion/newDevice/ itemCompletionDetails/ itemDataDetails/ deviceModel	Field	MWM_SOM_ Model	MWM_Model	SOM_Model

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
meterConfigurationType	message/utilityCompletionInformation/newDevice/meterCompletionDetails/meterDataDetails/meterConfigurationType	Field	meterConfigurationType	message/utilityCompletionInformation/newDevice/meterCompletionDetails/meterDataDetails/meterConfigurationType	Field	MWM_SOM_DeviceConfigurationType.dvm	MWM_DeviceConfigurationType	SOM_DeviceConfigurationType
meterLocation	message/utilityCompletionInformation/newDevice/meterCompletionDetails/meterDataDetails/meterLocation	Field	meterLocation	message/utilityCompletionInformation/newDevice/meterCompletionDetails/meterDataDetails/meterLocation	Field	MWM_SOM_MeterLocation.dvm	MWM_MeterLocation	SOM_MeterLocation
timeOfUse	message/utilityCompletionInformation/newDevice/meterCompletionDetails/readingCompletionDetails/readingDetails/readingDetailsList/timeOfUse	Field	timeOfUse	message/utilityCompletionInformation/newDevice/meterCompletionDetails/readingCompletionDetails/readingDetails/readingDetailsList/timeOfUse	Field	MWM_SOM_TOU.dvm	MWM_TOU	SOM_TOU
unitOfMeasure	message/utilityCompletionInformation/newDevice/meterCompletionDetails/readingCompletionDetails/readingDetails/readingDetailsList/unitOfMeasure	Field	unitOfMeasure	message/utilityCompletionInformation/newDevice/meterCompletionDetails/readingCompletionDetails/readingDetails/readingDetailsList/unitOfMeasure	Field	MWM_SOM_UOM.dvm	MWM_UOM	SOM_UOM

Oracle Utilities Mobile Workforce Management FA Completion Request Message			Oracle Utilities Service Order Management FA Completion Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
meterConfigurationType	/message/utilityCompletionInformation/newDevice/meterCompletionDetails/verificationDetails/response/meterConfigurationType	Field	meterConfigurationType	/message/utilityCompletionInformation/newDevice/meterCompletionDetails/verificationDetails/response/meterConfigurationType	Field	MWM_SOM_DeviceConfigurationType.dvm	MWM_DeviceConfigurationType	SOM_DeviceConfigurationType
deviceStatusLeft	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/deviceStatusLeft	Field	deviceStatusLeft	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/deviceStatusLeft	Field	MWM_SOM_ItemStatus.dvm	MWM_ItemStatus	SOM_DeviceStatus
stockLocation	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/stockLocation	Field	stockLocation	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/stockLocation	Field	MWM_SOM_StockLocation.dvm	MWM_StockLocation	SOM_StockLocation
deviceManufacturer	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/itemDataDetails/deviceManufacturer	Field	deviceManufacturer	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/itemDataDetails/deviceManufacturer	Field	MWM_SOM_Manufacturer.dvm	MWM_Manufacturer	SOM_Manufacturer
deviceModel	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/itemDataDetails/deviceModel	Field	deviceModel	/message/utilityCompletionInformation/newDevice/itemCompletionDetails/itemDataDetails/deviceModel	Field	MWM_SOM_Model.dvm	MWM_Model	SOM_Model



## Create Activity

This section provides data mapping details for the following:

- [Create Activity Request](#)
- [Create Activity Response](#)

### Create Activity Request

Create Activity Request mapping details are as shown in the table below:

Oracle Utilities Mobile Workforce Management Create Activity Request Message			Oracle Utilities Service Order Management Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
			D1-FARequestSynchronous		OutermostTag			
requestMessage		OutermostTag	request		Group			
relatedHostExternalId	requestMessage	Field	relatedActivityId	Request	Field			
sourceSystem		Field	sourceSystem	Request	Field			
hostTaskType	requestMessage	Field	fieldTaskType	Request	Field			
taskType	requestMessage	Field	taskType	Request	Field	MWM_SOM_FieldTaskType.dvm	MWM_TaskType	SOM_FieldTaskType
servicePointId	requestMessage/servicePointDataDetails	Field	spId	Request	Field			
appointmentRequired	requestMessage	Field	isAppointmentNecessary	Request	Field	MWM_SOM_AppointmentRequired.dvm	MWM_AppointmentRequired	SOM_AppointmentRequired
relatedHostExternalId	requestMessage	Field	relatedActivityId	Request	Field			
taskId	requestMessage	Field	requesterTransactionId	Request/externalActivityElement	Field			

Oracle Utilities Mobile Workforce Management Create Activity Request Message			Oracle Utilities Service Order Management Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
startDateTime	requestMessage/ timeWindows/ timeWindowsList/startDateTime	Field	startDateTime	Request/ externalActivityElement				
takenBy	requestMessage/ appointmentInformation/ takenBy	Field	requesterUserId	Request/ externalActivityElement				
location/siteAddress/	requestMessage	Group	addressConstituents	Request	Group			
country	requestMessage/ location/ siteAddress	Field	country	addressConstituents	Field	MWM_SOM_Country.dvm	MWM_Country	SOM_Country
address1	requestMessage/ location/ siteAddress	Field	address1	addressConstituents	Field			
address2	requestMessage/ location/ siteAddress	Field	address2	addressConstituents	Field			
address3	requestMessage/ location/ siteAddress	Field	address3	addressConstituents	Field			
address4	requestMessage/ location/ siteAddress	Field	address4	addressConstituents	Field			
city	requestMessage/ location/ siteAddress	Field	city	addressConstituents	Field			
	requestMessage/ location/ siteAddress	Field	geographic	addressConstituents	Field			

Oracle Utilities Mobile Workforce Management Create Activity Request Message			Oracle Utilities Service Order Management Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
county	requestMessage/location/siteAddress	Field	county	addressConstituents	Field			
state	requestMessage/location/siteAddress	Field	state	addressConstituents	Field			
postal	requestMessage/location/siteAddress	Field	postal	addressConstituents	Field			
geocodeLatitude	requestMessage/location/siteAddress	Field	geocodeLatitude	addressConstituents	Field			
geocodeLongitude	requestMessage/location/siteAddress	Field	geocodeLongitude	addressConstituents	Field			

## Create Activity Response

Create Activity Response mapping details are as shown in the table below:

Oracle Utilities Service Order Management Create Activity Response Message			Oracle Utilities Mobile Workforce Management Create Activity Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
D1-FARequestSynchronous		OutermostTag						
response		Group	responseMessage		OutermostTag			
referenceId	response	Field	newHostExternalId	responseMessage	Field			
exceptionInformation	response	Group						
exceptionInformationList	exceptionInformation	List	exceptionInfo					
messageCategory	exceptionInformationList	Field	messageCategory	exceptionInfo	Field	MWM_SOM_ErrorCode.dvm	MWM_ErrorCode	SOM_ErrorCode
messageNumber	exceptionInformationList	Field	messageNumber	exceptionInfo	Field	MWM_SOM_ErrorCode.dvm	MWM_ErrorCode	SOM_ErrorCode
comments	exceptionInformationList	Field	errorDetail	exceptionInfo	Field			
<!--External Identifiers--> For each Identifiers								
externalIdentifiers	response	Group	externalIdentifiers	responseMessage	Group			
externalSystemList	response/externalIdentifiers	List	externalSystemList	responseMessage/externalIdentifiers	List			
dataSourceIndicator	response/externalIdentifiers/externalSystemList	Field	dataSourceIndicator	responseMessage/externalIdentifiers/externalSystemList	Field			
entities	response/externalIdentifiers/externalSystemList	Group	entities	responseMessage/externalIdentifiers/externalSystemList	Group			

Oracle Utilities Service Order Management Create Activity Response Message			Oracle Utilities Mobile Workforce Management Create Activity Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
entityList	response/ externalIdentifiers/ externalSystemList/entities	List	entityList	responseMessage/ externalIdentifiers/ externalSystemList/entities	List			
entityName	response/ externalIdentifiers/ externalSystemList/entities/entityList	Field	entityName	responseMessage/ externalIdentifiers/ externalSystemList/entities/entityList	Field	MWM_SOM_EntityName.dvm	MWM_EntityName	SOM_EntityName
entityValue	response/ externalIdentifiers/ externalSystemList/entities/entityList	Field	entityValue	responseMessage/ externalIdentifiers/ externalSystemList/entities/entityList	Field			

## Activity Status

This section provides data mapping details for the following:

- [Activity Status Request](#)
- [Activity Status Response](#)

### Activity Status Request

Activity Status Request mapping details are as shown in the table below:

Oracle Utilities Service Order Management Activity Status Request Message			Oracle Utilities Mobile Workforce Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
			M1-ActivityStatusInquiry		OutermostTag			
sendDetails		OutermostTag	input	M1-ActivityStatusInquiry	Group			
hostExternalId	sendDetails	Field	hostExternalId	M1-ActivityStatusInquiry/	Field			
			input					

## Activity Status Response

Activity Status Response mapping details are as shown in the table below:

Oracle Utilities Mobile Workforce Management Activity Response			Oracle Utilities Service Order Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
responseDetails		OutermostTag	output		Group			
interimStatus	responseDetails	Field	statusForHost	output/statusDetails	Field	MWM_SOM_InterimStatus.dvm	MWM_InterimStatus	SOM_InterimStatus

# Appointment Window

This section provides data mapping details for the following:

- [Appointment Window Request](#)
- [Appointment Window Response](#)

## Appointment Window Request

Appointment Window Request mapping details are as shown in the table below:

Oracle Utilities Service Order Management Appointment Window Request Message			Oracle Utilities Mobile Workforce Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
			M1-RouteAppointmentRequestToScheduler		OutermostTag			
sendDetail		OutermostTag	input		Group			
			hostRequest		input			
hostExternalId	sendDetail	Field	hostExternalId	input/hostRequest	Field			
startDateTime	sendDetail	Field	startDateTime	input/hostRequest	Field			
endDateTime	sendDetail	Field	endDateTime	input/hostRequest	Field			
appointmentBookingGroup	sendDetail	Field	appointmentBookingGroup	input/hostRequest	Field	MWM_SOM_SlotGroup.dvm	SOM_SlotGroup	MWM_SlotGroup
maxAppointmentWindowCount	sendDetail	Field	maxAppointmentWindowCount	input/hostRequest	Field			
maxCostUnits	sendDetail	Field	maxCostUnits	input/hostRequest	Field			
timeZone	sendDetail	Field	timeZone	input/hostRequest	Field	MWM_SOM_TimeZone.dvm	SOM_TimeZone	MWM_TimeZone
taskType	sendDetail	Field	taskType	input/hostRequest	Field	SOM_MWM_TaskType.dvm	SOM_Criteria	MWM_TaskType



Oracle Utilities Service Order Management Appointment Window Request Message			Oracle Utilities Mobile Workforce Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
serviceArea	sendDetail	Field	serviceArea	input/hostRequest	Field			
geocodeLatitude	sendDetail	Field	geocodeLatitude	input/hostRequest	Field			
geocodeLongitude	sendDetail	Field	geocodeLongitude	input/hostRequest	Field			
duration	sendDetail	Field	duration	input/hostRequest	Field			
address1	sendDetail	Field	address1	input/hostRequest	Field			
address2	sendDetail	Field	address2	input/hostRequest	Field			
address3	sendDetail	Field	address3	input/hostRequest	Field			
address4	sendDetail	Field	address4	input/hostRequest	Field			
crossStreet	sendDetail	Field	crossStreet	input/hostRequest	Field			
city	sendDetail	Field	city	input/hostRequest	Field			
stateProvince	sendDetail	Field	stateProvince	input/hostRequest	Field			
suburb	sendDetail	Field	suburb	input/hostRequest	Field			
postal	sendDetail	Field	postal	input/hostRequest	Field			
country	sendDetail	Field	country	input/hostRequest	Field	MWM_SOM_Country.dvm	SOM_Country	MWM_Country
matchQuality	sendDetail	Field	matchQuality	input/hostRequest	Field			
siteDelay	sendDetail	Field	siteDelay	input/hostRequest	Field			

## Appointment Window Response

Appointment Window Response mapping details are as shown in the table below:

Oracle Utilities Mobile Workforce Management Appointment Window Response Message			Oracle Utilities Service Order Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
responseDetail		OutermostTag	output		Group			
appointmentBookingsList	responseDetail	List	appointmentBookingsList	output	List			
shiftId	appointmentBookingsList	Field	shiftId	ouput/appointmentBookingsList	Field			
arrivalDateTime	appointmentBookingsList	Field	arrivalDateTime	ouput/appointmentBookingsList	Field			
completionDateTime	appointmentBookingsList	Field	completionDateTime	ouput/appointmentBookingsList	Field			
rank	appointmentBookingsList	Field	rank	ouput/appointmentBookingsList	Field			
units	appointmentBookingsList	Field	units	ouput/appointmentBookingsList	Field			
appointmentWindowDateTime	appointmentBookingsList	Field	appointmentWindowDateTime	ouput/appointmentBookingsList	Field			
appointmentWindowDuration	appointmentBookingsList	Field	appointmentWindowDuration	ouput/appointmentBookingsList	Field			
				M1-RouteAppointmentRequestToScheduler/output/appointmentBookingResponse/				
messageCategory	messageData	Field	messageCategory	appointmentBookingResponse	Field			
messageNumber	messageCategory	Field	messageNumber	appointmentBookingResponse	Field			

Oracle Utilities Mobile Workforce Management Appointment Window Response Message			Oracle Utilities Service Order Management Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
					for each M1-RouteAppointmentRequestToScheduler/output/appointmentBookingResponse/messageParameters/messageParametersList			
Parameter type	MessageParameter	Field	Parameter Type	MessageParameter	Field			
parameterValue	MessageParameter	Field	ParameterValue	MessageParameter	Field			
MessageText	ResponseDetail	Field	MessageText	Output	Field			

## Process Activities

This section provides data mapping details for the following:

- [Process Activities Request](#)
- [Process Activities Response](#)

### Process Activities Request

Process Activity Request mapping details are as shown in the table below:

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
sendDetail		OutermostTag	M2-MaintainUtilityActsByHost		OutermostTag			
			request	M2-MaintainUtilityActsByHost	Group			
messageId	sendDetail	Field	messageId	request	Field			
hostExternalSystem	sendDetail	Field	hostExternalSystem	request	Field			
conditionalRequest	sendDetail	Group	conditionalRequest	request	Group			
conditionalBooking	conditionalRequest	Field	conditionalBooking	conditionalRequest	Field			
guaranteedRebook	conditionalRequest	Field	guaranteedRebook	conditionalRequest	Field			
maxCostUnits	conditionalRequest	Field	maxCostUnits	conditionalRequest	Field			
selectedShift	conditionalRequest	Field	selectedShift	conditionalRequest	Field			
activities	sendDetail	List	activities	request	List			
activity	sendDetail/activities	Group	activity	request/activities	Group			
hostAction	sendDetail/activities/activity	Field	hostAction	request/activities/activity	Field	MWM_SOM_ActionCode.dvm	SOM_ActionCode	MWM_ActionCode

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
hostActivityType	sendDetail/activities/activity	Field	hostActivityType	request/activities/activity	Field			
taskId	sendDetail/activities/activity	Field	taskId	request/activities/activity	Field			
taskType	sendDetail/activities/activity	Field	taskType	request/activities/activity	Field	SOM_MWM_TaskType.dvm	SOM_FieldTaskType, SOM_Criteria	MWM_TaskType
hostExternalId	sendDetail/activities/activity	Field	hostExternalId	request/activities/activity	Field			
hostTaskId	sendDetail/activities/activity	Field	hostTaskId	request/activities/activity	Field			
estimatedDuration	sendDetail/activities/activity	Field	estimatedDuration	request/activities/activity	Field			
manuallyAllocateToShift	sendDetail/activities/activity	Field	manuallyAllocateToShift	request/activities/activity	Field			
acknowledgementRequired	sendDetail/activities/activity	Field	acknowledgementRequired	request/activities/activity	Field			
queue	sendDetail/activities/activity	Field	queue	request/activities/activity	Field	MWM_SOM_Priority.dvm	SOM_Priority	MWM_Priority
activityComments	sendDetail/activities/activity	Field	activityComments	request/activities/activity	Field			
lateCost	sendDetail/activities/activity	Field	lateCost	request/activities/activity	Field			
overrideCapabilities	sendDetail/activities/activity	Field	overrideCapabilities	request/activities/activity	Field			
siteDelay	sendDetail/activities/activity	Field	siteDelay	request/activities/activity	Field			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
utilityCommonActivityDetails	sendDetail/activities/activity	Group	utilityCommonActivityDetails	request/activities/activity	Group			
lifeSupport	sendDetail/activities/activity/utilityCommonActivityDetails	Field	lifeSupport	request/activities/activity/utilityCommonActivityDetails	Field	MWM_SOM_LifeSupport.dvm	SOM_LifeSupport	MWM_LifeSupport
externalIdentifiers	sendDetail/activities/activity	Group	externalIdentifiers	request/activities/activity	Group			
externalSystemList	sendDetail/activities/activity/externalIdentifiers	List	externalSystemList	request/activities/activity/externalIdentifiers	List			
dataSourceIndicator	sendDetail/activities/activity/externalIdentifiers/externalSystemList	Field	dataSourceIndicator	request/activities/activity/externalIdentifiers/externalSystemList	Field			
entities	sendDetail/activities/activity/externalIdentifiers/externalSystemList	Group	entities	request/activities/activity/externalIdentifiers/externalSystemList	Group			
entityList	sendDetail/activities/activity/externalIdentifiers/externalSystemList/entities	List	entityList	request/activities/activity/externalIdentifiers/externalSystemList/entities	List			
entityName	sendDetail/activities/activity/externalIdentifiers/externalSystemList/entities/entityList	Field	entityName	request/activities/activity/externalIdentifiers/externalSystemList/entities/entityList	Field	MWM_SOM_EntityName.dvm	SOM_EntityName	MWM_EntityName

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
entityValue	sendDetail/activities/activity/externalIdentifiers/externalSystemList/entities/entityList	Field	entityValue	request/activities/activity/externalIdentifiers/externalSystemList/entities/entityList	Field			
customerInformation	sendDetail/activities/activity	Group	customerInformation	request/activities/activity	Group			
customerName	sendDetail/activities/activity/customerInformation	Field	customerName	request/activities/activity/customerInformation	Field			
contactName	sendDetail/activities/activity/customerInformation	Field	contactName	request/activities/activity/customerInformation	Field			
mainPhone	sendDetail/activities/activity/customerInformation	Field	mainPhone	request/activities/activity/customerInformation	Field			
cellPhone	sendDetail/activities/activity/customerInformation	Field	cellPhone	request/activities/activity/customerInformation	Field			
accountId	sendDetail/activities/activity/customerInformation	Field	accountId	request/activities/activity/customerInformation	Field			
personId	sendDetail/activities/activity/customerInformation	Field	personId	request/activities/activity/customerInformation	Field			
location	sendDetail/activities/activity	Group	location	request/activities/activity	Group			
siteAddress	sendDetail/activities/activity/location	Group	siteAddress	request/activities/activity/location	Group			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
address1	sendDetail/activities/activity/location/siteAddress	Field	address1	request/activities/activity/location/siteAddress	Field			
address2	sendDetail/activities/activity/location/siteAddress	Field	address2	request/activities/activity/location/siteAddress	Field			
address3	sendDetail/activities/activity/location/siteAddress	Field	address3	request/activities/activity/location/siteAddress	Field			
address4	sendDetail/activities/activity/location/siteAddress	Field	address4	request/activities/activity/location/siteAddress	Field			
crossStreet	sendDetail/activities/activity/location/siteAddress	Field	crossStreet	request/activities/activity/location/siteAddress	Field			
suburb	sendDetail/activities/activity/location/siteAddress	Field	suburb	request/activities/activity/location/siteAddress	Field			
city	sendDetail/activities/activity/location/siteAddress	Field	city	request/activities/activity/location/siteAddress	Field			
county	sendDetail/activities/activity/location/siteAddress	Field	county	request/activities/activity/location/siteAddress	Field			
state	sendDetail/activities/activity/location/siteAddress	Field	state	request/activities/activity/location/siteAddress	Field			
postal	sendDetail/activities/activity/location/siteAddress	Field	postal	request/activities/activity/location/siteAddress	Field			



Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
country	sendDetail/activities/activity/location/siteAddress	Field	country	request/activities/activity/location/siteAddress	Field	MWM_SOM_Country	SOM_Country	MWM_Country
geocodeLatitude	sendDetail/activities/activity/location/siteAddress	Field	geocodeLatitude	request/activities/activity/location/siteAddress	Field			
geocodeLongitude	sendDetail/activities/activity/location/siteAddress	Field	geocodeLongitude	request/activities/activity/location/siteAddress	Field			
siteInstructions	sendDetail/activities/activity/location	Field	siteInstructions	request/activities/activity/location	Field			
serviceAddress	sendDetail/activities/activity/location	Group	serviceAddress	request/activities/activity/location	Group			
address1	sendDetail/activities/activity/location/serviceAddress	Field	address1	request/activities/activity/location/serviceAddress	Field			
address2	sendDetail/activities/activity/location/serviceAddress	Field	address2	request/activities/activity/location/serviceAddress	Field			
address3	sendDetail/activities/activity/location/serviceAddress	Field	address3	request/activities/activity/location/serviceAddress	Field			
address4	sendDetail/activities/activity/location/serviceAddress	Field	address4	request/activities/activity/location/serviceAddress	Field			
crossStreet	sendDetail/activities/activity/location/serviceAddress	Field	crossStreet	request/activities/activity/location/serviceAddress	Field			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
suburb	sendDetail/activities/activity/location/serviceAddress	Field	suburb	request/activities/activity/location/serviceAddress	Field			
city	sendDetail/activities/activity/location/serviceAddress	Field	city	request/activities/activity/location/serviceAddress	Field			
county	sendDetail/activities/activity/location/serviceAddress	Field	county	request/activities/activity/location/serviceAddress	Field			
state	sendDetail/activities/activity/location/serviceAddress	Field	state	request/activities/activity/location/serviceAddress	Field			
postal	sendDetail/activities/activity/location/serviceAddress	Field	postal	request/activities/activity/location/serviceAddress	Field			
country	sendDetail/activities/activity/location/serviceAddress	Field	country	request/activities/activity/location/serviceAddress	Field	MWM_SOM_Country	SOM_Country	MWM_Country
geocodeLatitude	sendDetail/activities/activity/location/serviceAddress	Field	geocodeLatitude	request/activities/activity/location/serviceAddress	Field			
geocodeLongitude	sendDetail/activities/activity/location/serviceAddress	Field	geocodeLongitude	request/activities/activity/location/serviceAddress	Field			
serviceInstructions	sendDetail/activities/activity/location	Field	serviceInstructions	request/activities/activity/location	Field			
serviceArea	sendDetail/activities/activity/location	Field	serviceArea	request/activities/activity/location	Field			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
timeZone	sendDetail/activities/activity/location	Field	timeZone	request/activities/activity/location	Field	MWM_SOM_TimeZone	SOM_TimeZone	MWM_TimeZone
appointmentInformation	sendDetail/activities/activity	Group	appointmentInformation	request/activities/activity	Group			
appointment	sendDetail/activities/activity/appointmentInformation	Field	appointment	request/activities/activity/appointmentInformation	Field			
takenBy	sendDetail/activities/activity/appointmentInformation	Field	takenBy	request/activities/activity/appointmentInformation	Field			
takenDate	sendDetail/activities/activity/appointmentInformation	Field	takenDate	request/activities/activity/appointmentInformation	Field			
comments	sendDetail/activities/activity/appointmentInformation	Field	comments	request/activities/activity/appointmentInformation	Field			
timeWindows	sendDetail/activities/activity	Group	timeWindows	request/activities/activity	Group			
timeWindowsList	sendDetail/activities/activity/timeWindows	List	timeWindowsList	request/activities/activity/timeWindows	List			
startDateTime	sendDetail/activities/activitytimeWindows/timeWindowsList	Field	startDateTime	request/activities/activity/timeWindows/timeWindowsList	Field			
endDateTime	sendDetail/activities/activitytimeWindows/timeWindowsList	Field	endDateTime	request/activities/activity/timeWindows/timeWindowsList	Field			
timeWindowUsage	sendDetail/activities/activitytimeWindows/timeWindowsList	Field	timeWindowUsage	request/activities/activity/timeWindows/timeWindowsList	Field	MWM_SOM_TimeWindowUsage.dvm	SOM_TimeWindowUsage	MWM_TimeWindowUsage

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
windowCost	sendDetail/activities/activitytimeWindows/timeWindowsList	Field	windowCost	request/activities/activity/timeWindows/timeWindowsList	Field			
slaFlexibility	sendDetail/activities/activitytimeWindows/timeWindowsList	Field	slaFlexibility	request/activities/activity/timeWindows/timeWindowsList	Field			
servicePointDataDetails	sendDetail/activities/activity	Group	servicePointDataDetails	request/activities/activity	Group			
disconnectLocation	sendDetail/activities/activity/servicePointDataDetails	Field	disconnectLocation	request/activities/activity/servicePointDataDetails	Field	MWM_SOM_DisconnectLocation.dvm	SOM_DisconnectLocation	MWM_DisconnectLocation
serviceWarnings	sendDetail/activities/activity/servicePointDataDetails	Field	serviceWarnings	request/activities/activity/servicePointDataDetails	Field	MWM_SOM_ServiceWarnings.dvm	SOM_ServiceWarnings	MWM_ServiceWarnings
serviceInstructions	sendDetail/activities/activity/servicePointDataDetails	Field	serviceInstructions	request/activities/activity/servicePointDataDetails	Field	MWM_SOM_ServiceInstructions.dvm	SOM_ServiceInstructions	MWM_ServiceInstructions
instructionDetails	sendDetail/activities/activity/servicePointDataDetails	Field	instructionDetails	request/activities/activity/servicePointDataDetails	Field			
serviceAgreementStatus	sendDetail/activities/activity/servicePointDataDetails	Field	serviceAgreementStatus	request/activities/activity/servicePointDataDetails	Field			
servicePointId	sendDetail/activities/activity/servicePointDataDetails	Field	servicePointId	request/activities/activity/servicePointDataDetails	Field			
serviceAgreementId	sendDetail/activities/activity/servicePointDataDetails	Field	serviceAgreementId	request/activities/activity/servicePointDataDetails	Field			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
premiseId	sendDetail/activities/activity/servicePointDataDetails	Field	premiseId	request/activities/activity/servicePointDataDetails	Field			
meterDataDetails	sendDetail/activities/activity	Group	meterDataDetails	request/activities/activity	Group			
badgeNumber	sendDetail/activities/activity/meterDataDetails	Field	badgeNumber	request/activities/activity/meterDataDetails	Field			
deviceManufacturer	sendDetail/activities/activity/meterDataDetails	Field	deviceManufacturer	request/activities/activity/meterDataDetails	Field	MWM_SOM_Manufacturer.dvm	SOM_Manufacturer	MWM_Manufacturer
deviceId	sendDetail/activities/activity/meterDataDetails	Field	deviceId	request/activities/activity/meterDataDetails	Field			
deviceModel	sendDetail/activities/activity/meterDataDetails	Field	deviceModel	request/activities/activity/meterDataDetails	Field	MWM_SOM_Model.dvm	SOM_Model	MWM_Model
meterConfigurationType	sendDetail/activities/activity/meterDataDetails	Field	meterConfigurationType	request/activities/activity/meterDataDetails	Field	MWM_SOM_DeviceConfigurationType.dvm	SOM_DeviceConfigurationType	MWM_DeviceConfigurationType
meterLocation	sendDetail/activities/activity/meterDataDetails	Field	meterLocation	request/activities/activity/meterDataDetails	Field	MWM_SOM_MeterLocation.dvm	SOM_MeterLocation	MWM_MeterLocation
readingDetails	sendDetail/activities/activity	Group	readingDetails	request/activities/activity	Group			
readingDetailsList	sendDetail/activities/activity/readingDetails	List	readingDetailsList	request/activities/activity/readingDetails	List			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
readSequence	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	readSequence	request/activities/activity/readingDetails/readingDetailsList	Field			
unitOfMeasure	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	unitOfMeasure	request/activities/activity/readingDetails/readingDetailsList	Field	MWM_SOM_UOM.dvm	SOM_UOM	MWM_UOM
timeOfUse	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	timeOfUse	request/activities/activity/readingDetails/readingDetailsList	Field	MWM_SOM_TOU.dvm	SOM_TOU	MWM_TOU
numberOfDials	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	numberOfDials	request/activities/activity/readingDetails/readingDetailsList	Field			
numberOfDecimals	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	numberOfDecimals	request/activities/activity/readingDetails/readingDetailsList	Field			
upperLimit	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	upperLimit	request/activities/activity/readingDetails/readingDetailsList	Field			
lowerLimit	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	lowerLimit	request/activities/activity/readingDetails/readingDetailsList	Field			
reading	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	reading	request/activities/activity/readingDetails/readingDetailsList	Field			
overrideReading	sendDetail/activities/activity/readingDetails/readingDetailsList	Field	overrideReading	request/activities/activity/readingDetails/readingDetailsList	Field			
itemDataDetails	sendDetail/activities/activity	Group	itemDataDetails	request/activities/activity	Group			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
badgeNumber	sendDetail/activities/activity/itemDataDetails	Field	badgeNumber	request/activities/activity/itemDataDetails	Field			
deviceManufacturer	sendDetail/activities/activity/itemDataDetails	Field	deviceManufacturer	request/activities/activity/itemDataDetails	Field	MWM_SOM_Manufacturer.dvm	SOM_Manufacturer	MWM_Manufacturer
deviceId	sendDetail/activities/activity/itemDataDetails	Field	deviceId	request/activities/activity/itemDataDetails	Field			
deviceModel	sendDetail/activities/activity/itemDataDetails	Field	deviceModel	request/activities/activity/itemDataDetails	Field			
collectionDataDetails	sendDetail/activities/activity	Group	collectionDataDetails	request/activities/activity	Group			
payoffAmount	sendDetail/activities/activity/collectionDataDetails	Field	payoffAmount	request/activities/activity/collectionDataDetails	Field			
currentAmount	sendDetail/activities/activity/collectionDataDetails	Field	currentAmount	request/activities/activity/collectionDataDetails	Field			
arrearsDataDetails	sendDetail/activities/activity/collectionDataDetails	Field	arrearsDataDetails	request/activities/activity/collectionDataDetails	Field			
disputedAmount	sendDetail/activities/activity/collectionDataDetails	Field	disputedAmount	request/activities/activity/collectionDataDetails	Field			
newCharges	sendDetail/activities/activity/collectionDataDetails	Field	newCharges	request/activities/activity/collectionDataDetails	Field			

Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
lessThanThirtyDaysAmount	sendDetail/activities/activity/collectionDataDetails	Field	lessThanThirtyDaysAmount	request/activities/activity/collectionDataDetails	Field			
thirtyDaysAmount	sendDetail/activities/activity/collectionDataDetails	Field	thirtyDaysAmount	request/activities/activity/collectionDataDetails	Field			
overSixtyDaysAmount	sendDetail/activities/activity/collectionDataDetails	Field	overSixtyDaysAmount	request/activities/activity/collectionDataDetails	Field			
arrearsDataDetails	sendDetail/activities/activity/collectionDataDetails	Field	arrearsDataDetails	request/activities/activity/collectionDataDetails	Field			
paymentHistory	sendDetail/activities/activity/collectionDataDetails	Group	paymentHistory	request/activities/activity/collectionDataDetails	Group			
paymentHistoryList	sendDetail/activities/activity/collectionDataDetails/paymentHistory	List	paymentHistoryList	request/activities/activity/collectionDataDetails/paymentHistory	List			
sequenceNumber	sendDetail/activities/activity/collectionDataDetails/paymentHistory/paymentHistoryList	Field	sequenceNumber	request/activities/activity/collectionDataDetails/paymentHistoryList	Field			
paymentDate	sendDetail/activities/activity/collectionDataDetails/paymentHistory/paymentHistoryList	Field	paymentDate	request/activities/activity/collectionDataDetails/paymentHistoryList	Field			



Oracle Utilities Service Order Management Process Activities Request Message			Oracle Utilities Mobile Workforce Management Process Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
paymentAmount	sendDetail/activities/activity/collectionDataDetails/paymentHistory/paymentHistoryList	Field	paymentAmount	request/activities/activity/collectionDataDetails/paymentHistoryList	Field			
paymentCancellationReason	sendDetail/activities/activity/collectionDataDetails/paymentHistory/paymentHistoryList	Field	paymentCancellationReason	request/activities/activity/collectionDataDetails/paymentHistoryList	Field			

## Process Activities Response

Process Activity Response mapping details are as shown in the table below:

Oracle Utilities Mobile Workforce Management Process Activities Response Message			Oracle Utilities Service Order Management Activities Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
M2-MaintainUtilityActsByHost		OutermostTag						
response	M2-MaintainUtilityActsByHost	Group	responseDetail		OutermostTag			
dispatcherNotified	response	Field	dispatcherNotified	responseDetail	Field			
failedCancellation	response	Group	failedCancellation	responseDetail	Group			
tasks	response/failedCancellation	List	tasks	responseDetail/failedCancellation	List			
taskId	response/failedCancellation/tasks	Field	taskId	responseDetail/failedCancellation/tasks	Field			
messageStatus	response	Field	messageStatus	responseDetail	Field			
messageText	response	Field	messageText	responseDetail	Field			
messageData	response	Group	messageData	responseDetail	Group			
messageCategory	response/messageData	Field	messageCategory	responseDetail/messageData	Field	MWM_SOM_ErrorCode.dvm	MWM_ErrorCode	SOM_ErrorCode
messageNumber	response/messageData	Field	messageNumber	responseDetail/messageData	Field	MWM_SOM_ErrorCode.dvm	MWM_ErrorCode	SOM_ErrorCode
messageParameters	response/messageData	Group	messageParameters	responseDetail/messageData	Group			

Oracle Utilities Mobile Workforce Management Process Activities Response Message			Oracle Utilities Service Order Management Activities Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Mobile Workforce Management Column	Oracle Utilities Service Order Management Column
parameters	response/ messageData/ messageParameters	List	parameters	responseDetail/ messageData/ messageParameters	List			
parameterType	response/ messageData/ messageParameters /parameters	Field	parameterType	responseDetail/ messageData/ messageParameters /parameters	Field			
parameterValue	response/ messageData/ messageParameters /parameters	Field	parameterValue	responseDetail/ messageData/ messageParameters /parameters	Field			

## Query Service Point

This section provides data mapping details for the following:

- [Query Service Point Request](#)
- [Query Service Point Response](#)

### Query Service Point Request

SP Query Request mapping details are as shown in the table below:

Oracle Utilities Service Order Management Request Message			Oracle Utilities Mobile Workforce Management Request Message			DVM Mapping		
Element Name	Parent Element	DVM Mapping	Element Name	Parent Element	DVM Mapping	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
	D1-FieldWorkSPQuery							
maximumRowsToReturn	input	Field	maxRowsToReturn	requestMessage	Field			
lastSPIDReturned	input	Field	lastServicePointId	requestMessage	Field			
address1	input	Field	address1	requestMessage	Field			
city	input	Field	city	requestMessage	Field			
postal	input	Field	postal	requestMessage	Field			
customerName	input	Field	customerName	requestMessage	Field			
badgeNumber	input	Field	badgeNumber	requestMessage	Field			
latitude	input	Field	geocodeLatitude	requestMessage	Field			
longitude	input	Field	geocodeLongitude	requestMessage	Field			
includeAbolishflag	input	Field	includeAbolish	requestMessage	Field			

## Query Service Point Response

SP Query Response mapping details are as shown in the table below:

Oracle Utilities Service Order Management Response Message			Oracle Utilities Mobile Workforce Management Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
D1-FieldWorkSPQuery								
customerName	/ output / servicePoints /servicePointsList/ servicePointQueryData / customerInformation	Field	customerName	responseMessage / servicePoints / servicePointsList / servicePointQueryData / customerInformation	Field			
address1	/ output / servicePoints /servicePointsList/ servicePointQueryData / location /siteAddress	Field	address1	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
address2	/ output / servicePoints /servicePointsList/ servicePointQueryData / location /siteAddress	Field	address2	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
address3	/ output / servicePoints /servicePointsList/ servicePointQueryData / location /siteAddress	Field	address3	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
address4	/ output / servicePoints /servicePointsList/ servicePointQueryData / location /siteAddress	Field	address4	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			

Oracle Utilities Service Order Management Response Message			Oracle Utilities Mobile Workforce Management Response Message			DVM Mapping	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM		
crossStreet	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	crossStreet	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
suburb	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	suburb	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
city	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	city	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
county	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	county	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
state	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	state	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			
postal	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	postal	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field			

Oracle Utilities Service Order Management Response Message			Oracle Utilities Mobile Workforce Management Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
country	/ output / servicePoints / servicePointsList / servicePointQueryData / location / siteAddress	Field	country	responseMessage / servicePoints / servicePointsList / servicePointQueryData / siteAddress	Field	MWM_SOM_Country	SOM_Country	MWM_Country
serviceArea	/ output / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails / location	Field	serviceArea	responseMessage / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails / location	Field			
timeZone	/ output / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails / location	Field	timeZone	responseMessage / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails / location	Field			
servicePointID	/ output / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails	Field	servicePointID	responseMessage / servicePoints / servicePointsList / servicePointQueryData / servicePointDataDetails	Field			
badgeNumber	/ output / servicePoints / servicePointsList / servicePointQueryData / meterDataDetails	Field	badgeNumber	responseMessage / servicePoints / servicePointsList / servicePointQueryData / meterDataDetails	Field			
meterConfigurationType	/ output / servicePoints / servicePointsList / servicePointQueryData / meterDataDetails	Field	meterConfigurationType	responseMessage / servicePoints / servicePointsList / servicePointQueryData / meterDataDetails	Field	MWM_SOM_MeterConfigurationType	SOM_MeterConfigurationType	MWM_MeterConfigurationType

Oracle Utilities Service Order Management Response Message			Oracle Utilities Mobile Workforce Management Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Utilities Mobile Workforce Management Column
badgeNumber	/ output / servicePoints /servicePointsList/ servicePointQueryData / itemDataDetails	Field	badgeNumber	responseMessage / servicePoints / servicePointsList / servicePointQueryData/ itemDataDetails	Field			
servicePointType Code	servicePointQueryData	Field	servicePointTypeCode	servicePointQueryData	Field			
servicePointTypeDescription	servicePointQueryData	Field	servicePointTypeDescription	servicePointQueryData	Field			
servicePointStatusCode	servicePointQueryData	Field	servicePointStatusCode	servicePointQueryData	Field			
servicePointStatusDescription	servicePointQueryData	Field	servicePointStatusDescription	servicePointQueryData	Field			
servicePointSourceStatusCode	servicePointQueryData	Field	servicePointSourceStatusCode	servicePointQueryData	Field			
servicePointSourceStatusDescription	servicePointQueryData	Field	servicePointSourceStatusDescription	servicePointQueryData	Field			