

**Oracle Utilities Customer To Meter
Integration to Oracle Field Service Cloud**

Configuration Guide

Release 18.1

F11650-01

October 2018

Copyright © 2018 Oracle and/or its affiliates. All rights reserved.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, delivered to U.S. Government end users are "commercial computer software" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, use, duplication, disclosure, modification, and adaptation of the programs, including any operating system, integrated software, any programs installed on the hardware, and/or documentation, shall be subject to license terms and license restrictions applicable to the programs. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle and Java are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Xeon are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Opteron, the AMD logo, and the AMD Opteron logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

Preface	i
Audience	i
Documentation and Resources	i
Documentation Accessibility	ii
Conventions.....	ii
Abbreviations	iii
Chapter 1	
Introduction	1-1
Overview of the Integration	1-2
About Oracle Utilities Customer To Meter.....	1-2
About Oracle Field Service Cloud	1-2
About Oracle Integration Cloud	1-3
Software Requirements	1-3
Chapter 2	
Solution Architecture	2-1
Solution Diagram.....	2-2
Synchronous.....	2-2
One-way Asynchronous.....	2-3
Business Flows	2-4
Process Activity	2-4
Appointment Window Request	2-5
Interim Activity Status.....	2-7
Device Verification	2-8
Create Activity	2-9
Activity Completion/Cancellation.....	2-11
Chapter 3	
Configuring Oracle Utilities Customer To Meter	3-1
Configuring Admin Data.....	3-2
Message Senders	3-2
Outbound Message Types	3-3
External System	3-4
External Application (Service Provider)	3-5
Master Configuration.....	3-6
Activity Types	3-7
Adding Oracle Integration Cloud Certificates	3-8
Managing Catalog Services	3-8
Chapter 4	
Configuring Oracle Field Service Cloud	4-1
Integrating Using OIC/ICS	4-2
Configuring Oracle Field Service Cloud	4-2
Creating Time Slots.....	4-3

Creating Work Skills	4-3
Creating Capacity Categories.....	4-4
Designating Buckets for Capacity or Quota Management	4-6
Adding Quota to Bucket.....	4-7
Creating Plug-ins	4-8
Chapter 5	
Importing, Configuring, and Testing Integration Connections	5-1
Importing the Oracle Integration Cloud Package from Oracle Cloud Marketplace.....	5-2
Verifying the Package Import.....	5-2
Configuring Connections in Oracle Integration Cloud	5-3
Configuring UAC_SOM Connection	5-3
Configuring REST_Outbound Connection.....	5-4
Configuring OFSC Connection	5-4
Configuring REST_OFSCAppointment Connection	5-4
Configuring Agent (if applicable).....	5-4
Possible Combinations.....	5-5
Creating an Agent Group.....	5-5
Downloading Agent Installer	5-5
Installing On-Premises Agent	5-6
Setting up Certificates for Security.....	5-6
Chapter 6	
Configuring Lookups, Error Handling, and Email Notifications	6-1
Configuring Lookups.....	6-2
Editing Lookups.....	6-4
Error Handling.....	6-4
Error Handling Ways.....	6-4
Resubmitting the Error Instances in Oracle Integration Cloud	6-5
Email Notifications	6-5
Chapter 7	
Customizations	7-1
Mapping Extra Elements.....	7-2
Chapter 8	
Activating and Testing the Integration Flows.....	8-1
Activating Integration Flows	8-2
Testing the Integration Flows.....	8-3
Chapter 9	
Monitoring and Troubleshooting	9-1
Oracle Utilities Customer To Meter	9-2
Oracle Utilities Customer To Meter Error Logs.....	9-2
Oracle Integration Cloud.....	9-2
Monitoring Integration Flows	9-2
Troubleshooting.....	9-3
Appendix A	
Data Mapping	A-1
Activity Completion	A-2
Activity Completion Request Mapping.....	A-2
Activity Completion Response Mapping.....	A-2
Activity Status.....	A-22
Request Mapping for Find Activity.....	A-22
Response Mapping Find Activity Result	A-23
Request Mapping for Get Activity	A-23
Response Mapping for Oracle Utilities Customer To Meter	A-24
Appointment Request.....	A-25

Appointment Request Mapping.....	A-25
Appointment Response Mapping.....	A-26
Device Verification.....	A-29
Device Verification Request Mapping	A-29
Device Verification Response Mapping	A-30
Pickup Orders Create.....	A-37
Pickup Orders Create Request Mapping	A-37
Process Activity.....	A-41
Process Activity Request Mapping	A-41
Process Activity Response Mapping	A-56
Cancel Activity Request Mapping.....	A-58

Preface

Welcome to the Oracle Utilities Customer To Meter Integration to Oracle Field Service Cloud Configuration Guide.

Audience

This document is intended for anyone implementing the Oracle Utilities Customer To Meter Integration to Oracle Field Service Cloud.

Documentation and Resources

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

Product Documentation

Topic	Description
Oracle Utilities Customer To Meter Integration to Oracle Field Service Cloud Configuration Guide	Refer to the Oracle Utilities applications documentation page: http://docs.oracle.com/cd/E72219_01/documentation.html
Oracle Utilities Customer To Meter documentation	
Oracle Field Service Cloud documentation	https://docs.oracle.com/en/cloud/saas/field-service/18c/index.html

Additional Documentation

Resource	Location
Oracle Support	Visit My Oracle Support at https://support.oracle.com regularly to stay informed about updates and patches. Access the support site for the Edge Application Certification Matrix for Oracle Utilities Products (Doc ID 1454143.1) or refer to the Oracle Utilities Integrations page at http://my.oracle.com/site/tugbu/productsindustry/productinfo/utilities/integration/index.htm
Oracle Technology Network (OTN) Latest versions of documents	http://www.oracle.com/technetwork/index.html
Oracle University for training opportunities	http://education.oracle.com/

Documentation Accessibility

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

Access to Oracle Support

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

Conventions

The following text conventions are used in this document:

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

Abbreviations

The following terms are used in this document:

Term	Expanded Form
OFSC	Oracle Field Service Cloud
OIC	Oracle Integration Cloud
ICS	Integration Cloud Service
SOM	Oracle Utilities Service Order Management
DVM	Domain Value Map (Lookup)
C2M	Oracle Utilities Customer to Meter

Chapter 1

Introduction

This chapter provides an overview about the integration between Oracle Utilities Customer To Meter and Oracle Field Service Cloud using Oracle Integration Cloud. It focuses on software requirements, Oracle Integration Cloud, and business standpoint of the integration.

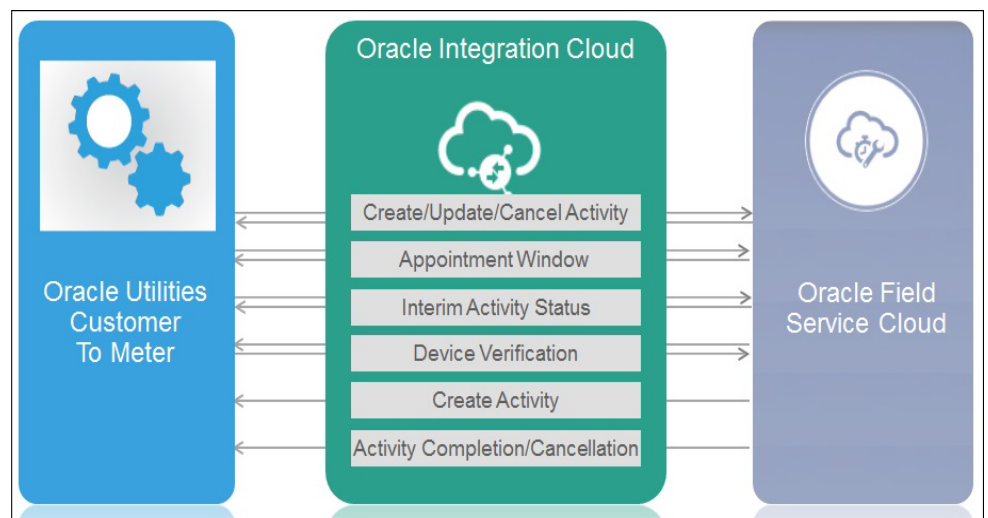
The chapter includes the following:

- [Overview of the Integration](#)
- [About Oracle Utilities Customer To Meter](#)
- [About Oracle Field Service Cloud](#)
- [About Oracle Integration Cloud](#)
- [Software Requirements](#)

Overview of the Integration

Oracle Utilities Customer To Meter Integration to Oracle Field Service Cloud helps to manage a fieldwork originated in the Oracle Utilities Customer to Meter solution in Oracle Field Service Cloud. The integration can be leveraged to create appointments and initiate/update/cancel activities in the field using the Oracle Field Service Cloud solution.

The major business flows revolve around activities, appointments, devices, and service points. The activities are created in Oracle Utilities Customer To Meter and sent to Oracle Field Service Cloud for the mobile worker to perform the activity. The field activity completion information is sent from Oracle Field Service Cloud to Oracle Utilities Customer To Meter where it is processed by Service Order Management (SOM). In addition, the integration supports item/device verification, an ability to request for Oracle Utilities Customer To Meter interim status of a field activity being processed by Oracle Field Service Cloud and the related pick-up orders.



About Oracle Utilities Customer To Meter

It is a customer information system (CIS) combined with Oracle Utilities Meter Data Management System as one single solution. It has pre-built integration with head-end and AMI systems and captures data from multiple sources and has multi-channel communication. With smart meters, this solution is capable of managing any size of smart programs with varying maturity levels. Various flows such as meter, person, service agreement, service points, meter reading, meter configuration are performed in a single application.

About Oracle Field Service Cloud

Oracle Field Service Cloud is built on time-based, self-learning, and predictive technology, empowering to solve business problems while evolving the field service organization. It has various modules to choose, such as forecasting, routing, capacity, mobility, collaboration, core manage, smart location, customer communication, and

more. It leverages the performance pattern profiles to create optimal daily routes and schedules and continues to learn as employee work patterns change over time.

About Oracle Integration Cloud

Oracle Integration Cloud is a unified platform to integrate the applications, automate processes, and create applications.

Using the Process Builder the business processes can be rapidly designed, automated, and managed in the cloud. Using integrations connect the applications into a continuous business flow. The integrations can be quickly developed and activated between both the applications that live in the cloud; and the applications still live on premises. The lookups help to match application specific codes between the two applications. With Visual Builder, build great web and mobile applications. There is no code, no setup, and no IT resources required; these can be embedded as widgets in different applications.

Integration Insights and Stream Analytics helps to simplify and extract business metrics and create custom dashboards.

Software Requirements

The application supported versions are:

- Oracle Utilities Customer To Meter - V2.7.x or higher
- Oracle Integration Cloud - V18.3.5.0.0 or higher
- Oracle Field Service Cloud - 18C or higher

Chapter 2

Solution Architecture

This chapter provides an overview of the application architecture used by the integration, including:

- [Solution Diagram](#)
- [Business Flows](#)

Solution Diagram

The technical aspects involved in Oracle Utilities Customer To Meter Integration to Oracle Field Service Cloud are:

- It is an integration between Oracle Utilities Customer To Meter and Oracle Field Service Cloud.
- The integration layer is made up of integration processes deployed on Oracle Integration Cloud.
- It uses web services and REST APIs to facilitate communication between the two applications.
- In the Oracle Utilities Customer To Meter initiated processes, outbound messages are sent and Oracle Field Service Cloud uses REST API to receive the messages.
- In the Oracle Field Service Cloud initiated processes, events are triggered and Oracle Utilities Customer To Meter uses inbound web services (IWS) to receive the messages.

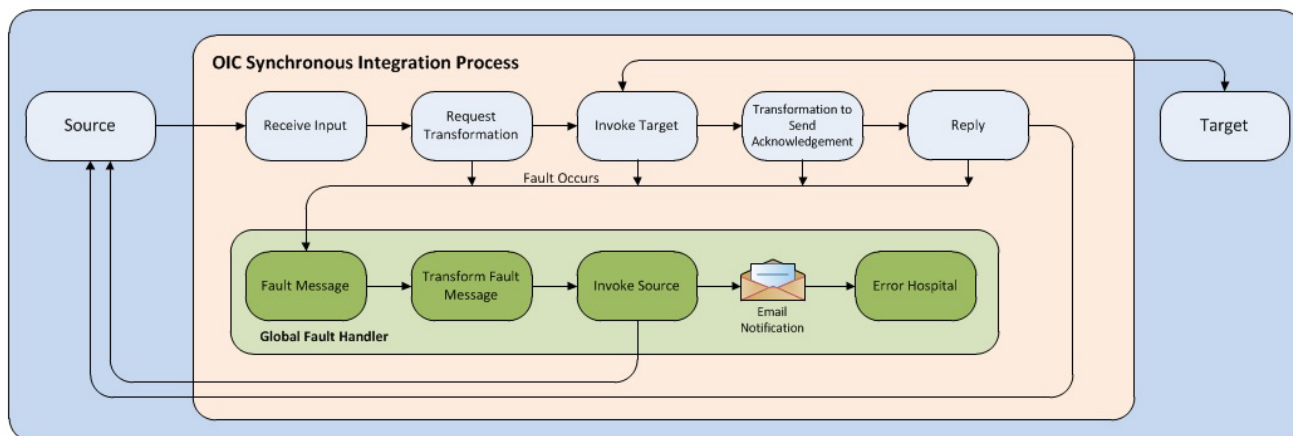
The integration patterns used in this solution are:

- [Synchronous](#)
- [One-way Asynchronous](#)

Synchronous

The synchronous integration process:

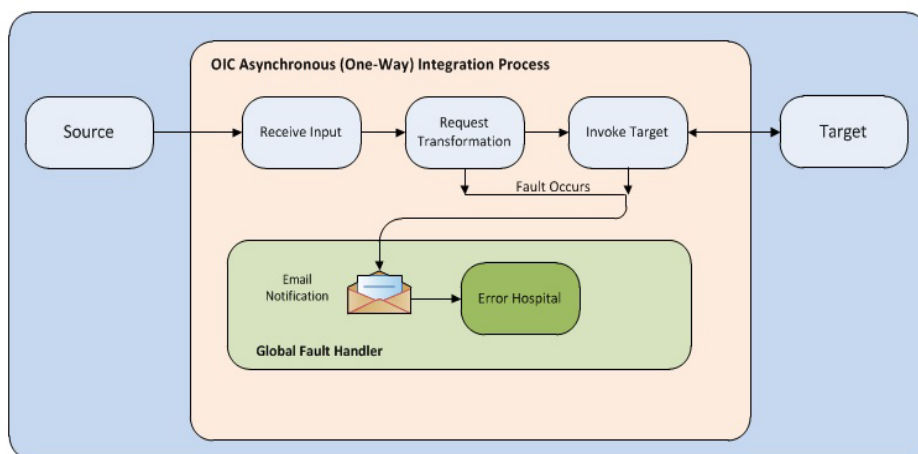
1. Receives request message from the source application.
2. Transforms the message from source format to the target format. Lookups are used for data translations.
3. Invokes the target application.
4. Transforms the message (after invoking the target application) from the target format back to the source format. It sends back an acknowledgment/synchronous response.
5. In case of any error, the global fault handler catches them and sends the transformed error message to the source application.
6. An optional email notification is sent to the respective users as configured.



One-way Asynchronous

The one-way asynchronous integration process:

1. Receives request message from the source application.
2. Transforms message from the source to the target format. Lookups are used for data translations.
3. Invokes target application to send the request message.
4. In case of any error, the global fault handler catches them.
5. The error instance can be re-submitted from Oracle Integration Cloud. Refer to the [Error Handling](#) section in [Chapter 6: Configuring Lookups, Error Handling, and Email Notifications](#) for more details.



Business Flows

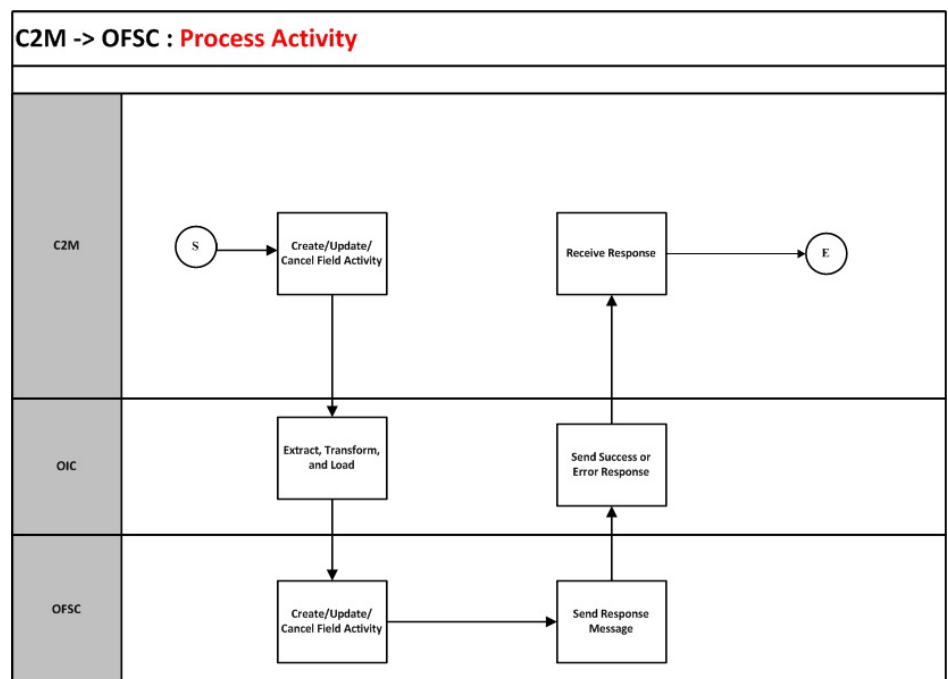
The integration scope supports the following business processes:

- [Process Activity](#)
- [Appointment Window Request](#)
- [Interim Activity Status](#)
- [Device Verification](#)
- [Create Activity](#)
- [Activity Completion/Cancellation](#)

Process Activity

This integration process is used to accept request from Oracle Utilities Customer To Meter to create, update, or cancel activities in Oracle Field Service Cloud. The information is sent synchronously from Oracle Utilities Customer To Meter, regardless of the activity type, and Oracle Field Service Cloud sends back a response.

The following diagram shows a graphical representation of the Process Activity integration process.



Business Processing

The integration process includes the following activities:

1. Oracle Utilities Customer To Meter sends the create/update/cancel activity request to the `PROCESS_ACTIVITY_SOMTOOFSC` integration process deployed on Oracle Integration Cloud.

2. The PROCESS_ACTIVITY_SOMTOOFSC process transforms the create/update/cancel activity request message from Oracle Utilities Customer To Meter to the request message format in Oracle Field Service Cloud and invokes bulkUpdate API.
3. Oracle Field Service Cloud sends the success or failure response to the integration transformed and sent to Oracle Utilities Customer To Meter.
4. Any errors are reported back to Oracle Utilities Customer To Meter through the global fault handler.
5. An optional email notification with error details is sent to the users configured in the SOMOFSC_Email_ID lookup.

Technical Details

The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

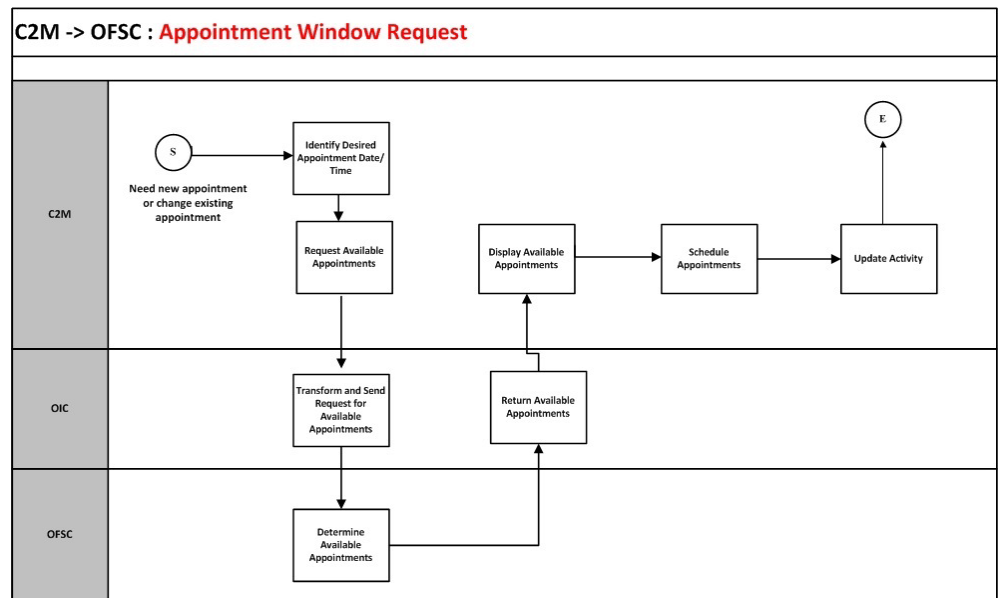
Artifacts	Value
Integration Process Name	PROCESS_ACTIVITY_SOMTOOFSC
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC BO/Operation	Activity/Bulk Update Activity
C2M BO	D1-FieldActivityOBComm D1-ActivityModifyOBComm

Appointment Window Request

This integration process provides a list of available appointments.

Oracle Utilities Customer To Meter sends the activity start and end date times from the **Appointment** portal and Oracle Field Service Cloud sends back the list of appointments available during that time window.

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



Business Processing

The integration process includes the following activities:

1. Oracle Utilities Customer To Meter sends the get available appointment request to GET_APPOINTMENT_SOMTOOFSC integration process deployed on Oracle Integration Cloud.
2. The GET_APPOINTMENT_SOMTOOFSC process transforms the request message from Oracle Utilities Customer To Meter to the request message format in Oracle Field Service Cloud and invokes the activityBookingOptions REST API.
3. Oracle Field Service Cloud sends the success or failure response to the integration transformed and sent to Oracle Utilities Customer To Meter.
4. Any errors are reported back to Oracle Utilities Customer To Meter through the global fault handler.
5. An optional email notification with error details is sent to the users configured in the SOMOFSC_Email_ID lookup.

Note: Make sure the fix for Bug 28474403 is applied on to the Oracle Utilities Customer To Meter environment. Also, in Oracle Field Service Cloud make sure the employee-based activities have 'Break' in the time slot label.

For example: Lunch Break, Second Lunch Break, and more

Technical Details

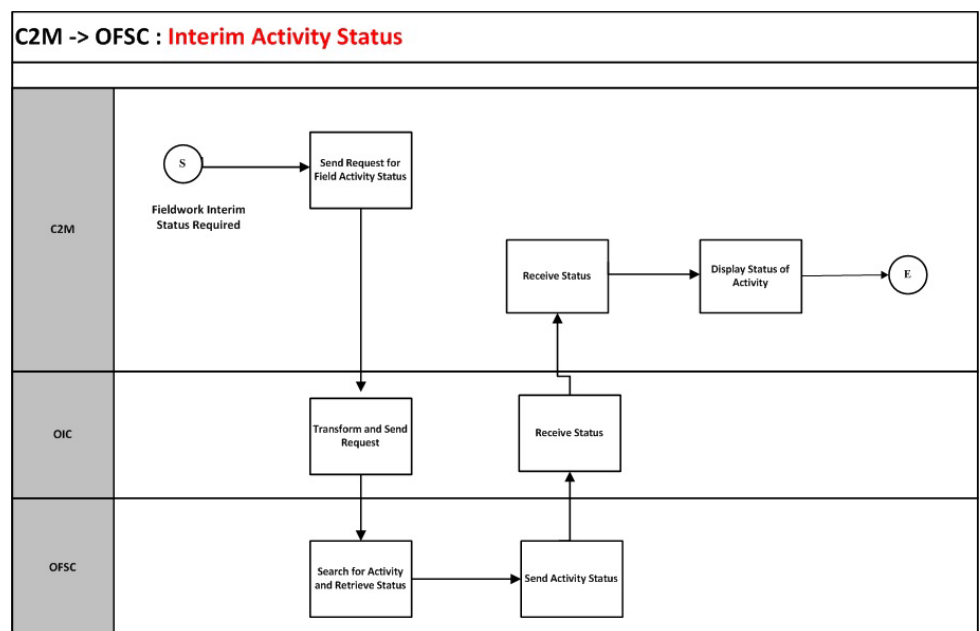
The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	GET_APPOINTMENT_SOMTOOFSC
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC API/Method	activityBookingOptions/GET
C2M BO	D1-ApptOBMessage

Interim Activity Status

Oracle Utilities Customer To Meter synchronously sends the requests for the interim activity status of the field activities and Oracle Field Service Cloud sends back the status.

The following diagram shows a graphical representation of the Interim Activity Status integration process.



Business Processing

The integration process includes the following activities:

1. Oracle Utilities Customer To Meter sends the interim activity status request to the GET_ACTIVITYST_SOMTOOFSC integration process deployed on Oracle Integration Cloud.
2. Oracle Field Service Cloud sends the success or failure response to the integration that is transformed and sent to Oracle Utilities Customer To Meter.
3. Any errors are reported back to Oracle Utilities Customer To Meter through the global fault handler.

- An optional email notification with error details are sent to the users configured in the SOMOFSC_Email_ID lookup.

Technical Details

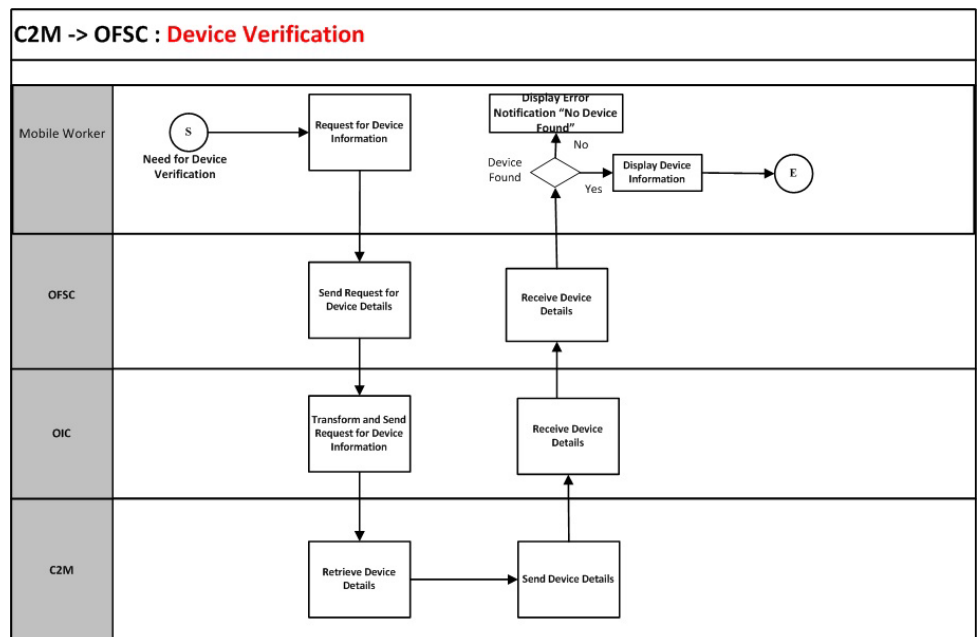
The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	GET_ACTIVITYYST_SOMTOOFSC
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC BO/Operations	Activity/Bulk Update Activity Activity/Get Activity
C2M BO	D1-InterimStatusRequest

Device Verification

This integration process is used to verify if the item/device is present in Oracle Utilities Customer To Meter. Oracle Field Service Cloud synchronously sends the requests for device verification with the device’s badge number and Oracle Utilities Customer To Meter sends back the details, such as device configuration type and verification status.

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



Business Processing

The integration process includes the following activities:

1. Oracle Field Service Cloud sends the device verification request to the DEVICE_VERIFICATI_OFSCITOSOM integration process deployed on Oracle Integration Cloud.
2. The DEVICE_VERIFICATI_OFSCITOSOM process transforms the request message from Oracle Field Service Cloud to the request message format in Oracle Utilities Customer To Meter and invokes the D1-DeviceVerificationService inbound web service.
3. Oracle Utilities Customer To Meter sends the success or failure response to the integration transformed and sent to Oracle Field Service Cloud.
4. Any errors are handled by the custom plug-in hosted on Oracle Field Service Cloud. A pop-up blocker appears in Oracle Field Service Cloud with the respective error details.

Technical Details

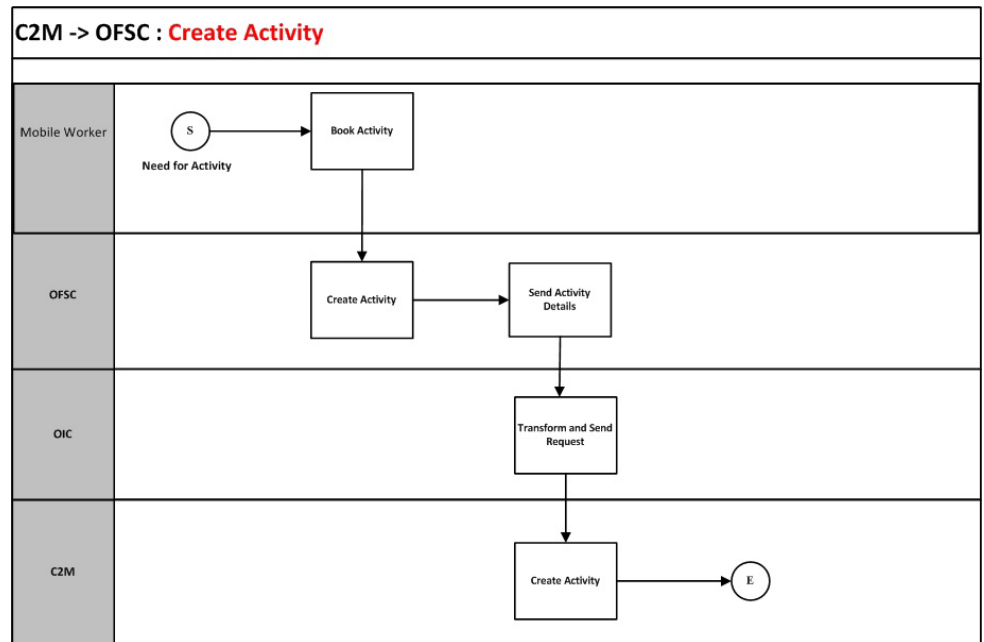
The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

Process	Value
Integration Process Name	DEVICE_VERIFICATI_OFSCITOSOM
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC Entity	Custom Plugin
C2M IWS	D1-DeviceVerificationService

Create Activity

This integration process is used to create an activity in an external system. Oracle Field Service Cloud sends a request to create activity in Oracle Utilities Customer To Meter.

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



Business Processing

The integration process includes the following activities:

1. Oracle Field Service Cloud sends the create activity request to the CREATE_ACTIVITY_OFSC2OSOM integration process deployed on Oracle Integration Cloud.
2. The CREATE_ACTIVITY_OFSC2OSOM process transforms the request message from Oracle Field Service Cloud to the request message format in Oracle Utilities Customer To Meter and invokes the D1-FARquestSynchronous inbound web service.
3. Any errors are captured through the global fault handler.
4. An optional email notification with error details are sent to the users configured in the SOMOFSC_Email_ID lookup.

Technical Details

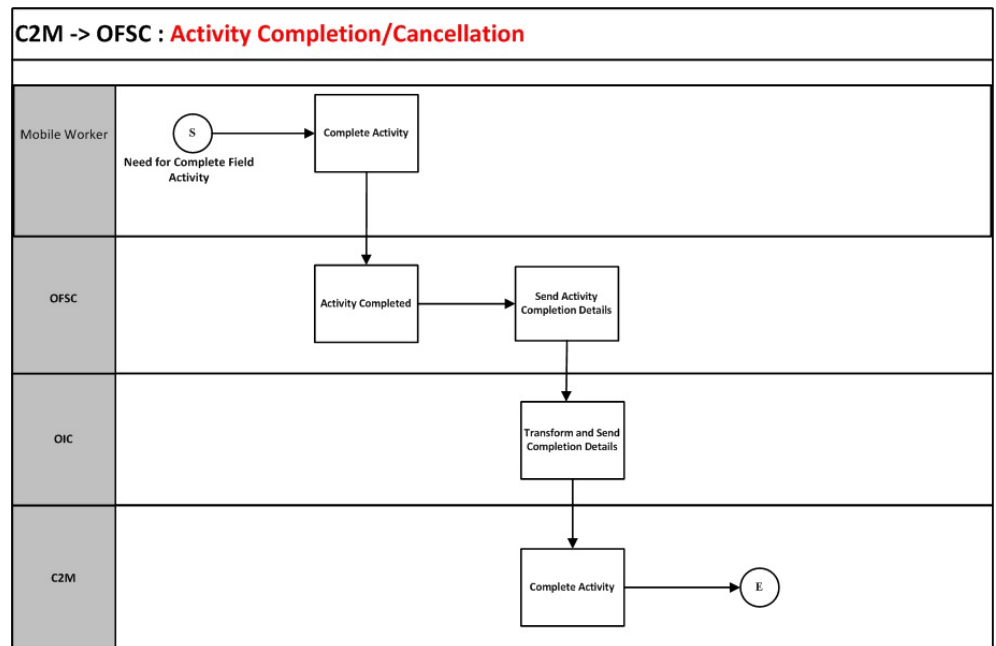
The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	CREATE_ACTIVITY_OFSC2OSOM
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC BO/Events	Activity/Activity Created Activity/Update Activity
C2M BO	D1-FARquestSynchronous

Activity Completion/Cancellation

This integration process is used to send the field activity completion/cancellation details from Oracle Field Service Cloud to Oracle Utilities Customer To Meter. Oracle Field Service Cloud sends the activity completion/cancellation details, along with the completion/cancellation status, to complete/cancel the activity in Oracle Utilities Customer To Meter.

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



Business Processing

The integration process includes the following activities:

1. Oracle Field Service Cloud sends the activity completion details to the COMPLETE_ACTIVITY_OFSC2OSOM integration process deployed on Oracle Integration Cloud.
2. The COMPLETE_ACTIVITY_OFSC2OSOM process transforms the message from Oracle Field Service Cloud to the message format in Oracle Utilities Customer To Meter and invokes the D1-FieldActivityIBComm inbound web service.
3. Any errors are captured through the global fault handler.
4. An optional email notification with error details are sent to the users configured in the SOMOFSC_Email_ID lookup.

Technical Details

The following table describes the integration processes and the respective Oracle Utilities Customer To Meter and Oracle Field Service Cloud artifacts used in this integration process.

Artifacts	Value
Integration Process Name	COMPLETE_ACTIVITY_OFSCITOSOM
Integration Package Name	oracle.util.somofsc.fieldwork
OFSC BO/Event	Activity/Activity Completed
	Activity/Activity Cancelled
	Activity/Activity Not Done
OFSC BO/Operation	Activity/Get Activity
C2M IWS	D1-FieldActivityIBComm

Chapter 3

Configuring Oracle Utilities Customer To Meter

This chapter elaborates about the configuration of about various data, messages and catalog for the integration used by Oracle Utilities Customer To Meter. It includes the following sections:

- [Configuring Admin Data](#)
- [Adding Oracle Integration Cloud Certificates](#)
- [Managing Catalog Services](#)

Configuring Admin Data

To configure the Oracle Utilities Customer To Meter setup for the integration:

1. Login to Oracle Utilities Customer To Meter.
2. Create message senders. Refer to the [Message Senders](#) section for details.
3. Create outbound message types. Refer to the [Outbound Message Types](#) section for details.
4. Create an external system. Refer to the [External System](#) section for details.
5. Create an external application. Refer to the [External Application \(Service Provider\)](#) section for details.
6. Complete the master configuration. Refer to the [Master Configuration](#) section for details.
7. Create activity types. Refer to the [Activity Types](#) section for details.
8. Generate certificates. Refer to the [Adding Oracle Integration Cloud Certificates](#) section for more details.

Message Senders

Create a new message sender for each integration service initiated from Oracle Utilities Customer To Meter.

To create a message sender:

1. Navigate to the **Message Sender** page from the **Admin** menu or from the **Search** menu.
2. Enter a unique message sender and its description.
3. Populate the following values:
 - Invocation Type - Real-time
 - Message Class - SOAPSNDR
 - 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 the Oracle Integration for Cloud (OIC) flow
 - HTTP Password - Password to access the OIC flow
 - 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.

- Message Namespace URI - Provide the namespace of the schema in the respective integration process.
- SOAP Insert Timestamp (Y/N) - Y
- Sender Security Type - Text

Message sender configuration for integration services

Message Sender	Description	Message Namespace URI	HTTP Header	HTTP URL
Process Activity				
INT_OFSC_PA	INT Process Activity-Message Sender-OFSC	http://xmlns.oracle.com/SRHUB/Message	SOAPAction:"ICS_OFSC_ProcessActivity"	"https://OIC_Host:OIC_Port/ic/ws/integration/v1/flows/oracleutilities/PROCESS_ACTIVITY_SOMTOOFS/1.0/"
Get Appointment				
INT_OFSC_GAP	INT Get appointment-Message Sender-OFSC	http://ouaf.oracle.com/outbound/D1-ApptOBMessage	SOAPAction:"OIC_OFSC_OIC_OFSC_GA"	"https://OIC_Host:OIC_Port/ic/ws/integration/v1/flows/oracleutilities/GET_APPOINTMENT_SOMTOOFS/1.0/"
Interim Status				
INT_OFSC_STA	INT Interim Status-Message Sender-OFSC	http://xmlns.oracle.com/SRHUB/Message	SOAPAction:"ICS_OFSC_GetStatus"	"https://OIC_Host:OIC_Port/ic/ws/integration/v1/flows/oracleutilities/GET_ACTIVITYS_T_SOMTOOFS/1.0/"

Outbound Message Types

To create a new outbound message type for each integration process:

1. Navigate to the **Outbound Message Type** page from the **Admin** menu or from the **Search** menu.
2. Enter an outbound message type, description, and detailed description.
3. Select the outbound message business object created for a specific service.

Outbound message types for integration services

Integration Service	Outbound Message Type	Description	Business Object
Process Activity	INT_OFSC_PA	INT Process Activity request to OFSC	D1-OutboundMessage
Get Appointment	INT_OFSC_GAP	INT Get appointment from OFSC	D1-ApptOBMessage
Interim Status	INT_OFSC_STA	INT Interim Status in OFSC	D1-InterimStatusRequest

External System

To create a new external system to support the integration:

1. Navigate to the **External System** page from the **Admin** menu or from the **Search** menu.
2. Enter a unique external system and description.

For example: Name = INT_OFSC_ES, Description = OFSC External System

3. Set the **Our Name in Their System** field to Oracle Utilities Customer To Meter.
4. Associate the outbound message types and message senders created to the external system.

For each outbound message type, set the following:

- Outbound Message Type - Outbound message type created for the respective integration service
- Processing Method - Real-time
- Message Sender - Set the message sender created for the integration service
- Date/Time Format - XSD
- Namespace Option - Configured on sender

For more information about message senders and outbound message type for each integration service, refer to the [Message Senders](#) and [Outbound Message Types](#) sections respectively.

External system configuration for integration services

Example External System - INT_OFSC_ES

Integration Service	Outbound Message Type	Message Sender
Process Activity	INT_OFSC_PA	INT_OFSC_PA
Get Appointment	INT_OFSC_GAP	INT_OFSC_GAP
Interim Status	INT_OFSC_STA	INT_OFSC_STA

External Application (Service Provider)

Create an external application with the respective external system reference and add processing roles to invoke each integration service.

To create a new external application to support the integration:

1. Navigate to the **External Application** page from the **Admin** menu or from the **Search** menu.
2. Enter a unique external application and description.

For example: Name = INT_OFSC_EA, Description = INT_OFSC External Application - Field Work System

3. Set the **Our Name in Their System** field to Oracle Utilities Customer To Meter.
4. Select the existing external system. For details about external system, refer to the [External System](#) section.

For example: INT_OFSC_ES

5. Add **Processing Method** for each integration service.
6. Associate the outbound message types and message senders to the external system. For each outbound message type, set the following:
 - Processing Role - Select the relevant processing role.
 - Business Object - Select the business object to generate the outbound message.
 - Description - Describe the processing method
 - Status - Active
 - Default Business Object - Select the business object for the respective outbound message type.
 - Default Outbound Message Type - Outbound message type for the respective integration service

Integration Service	Processing Role	Description	Default Business object	Default Outbound Message Type
Process Activity	Field Activity	INT OFSC Process activity Processing Role	D1-FieldActivityOBComm	INT_OFSC_PA

Integration Service	Processing Role	Description	Default Business object	Default Outbound Message Type
Appointment Request	Appointment Request	INT OFSC Appointment Processing Role	n/a	INT_OFSC_GAP
Interim Status	Interim Status Update	INT OFSC Interim Status Processing Role	n/a	INT_OFSC_STA
Update Activity	Update Activity	INT OFSC Update activity Processing Role	D1-ActivityModifyOBComm	INT_OFSC_PA
Cancel Activity	Cancellation Activity	INT OFSC Cancel activity Processing Role	D1-ActivityModifyOBComm	INT_OFSC_PA

Master Configuration

Note: [External System] denotes the name of the master configuration 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.

1. Navigate to the **Master Configuration** page from the **Admin** menu or from the **Search** menu.
2. Select **<External System> Master Configuration**.

For example: Oracle Utilities Customer To Meter Master Configuration

3. In the **Master Configuration Details** zone, configure the following values.

- Field Work System = <External Application name>

For example: INT_OFSC_EA

- Completion Event Exception Handling:

To Do Type = Activity To Do Type

To Do Role = System Default Role

Maximum Retries = 2

Retry Frequency = 00:05:00

- Management Dashboard Configuration:

Number of Days to Consider for Snapshot = 7

Weekends/Holidays Inclusion in Activity Duration = Exclude from Activity Duration

Work Calendar = US Bank Work Calendar

Default Expected Activity Completion Time (Hours) = 3

- Appointment Handling:

Appointment Slot Request (Hours) = 360

Default Appointment Handling System = <External Application name> ex:
INT_OFSC_EA

- Cut for Non-Payment Service Restrictions:
Life Support / Sensitive Load Option = Allow Cut Service
- FA Cancelability Criteria:
FA Cancellable Script = Determine FA Cancelability

Interim Status	FA Cancelability
Canceled	Not Cancellable
Completed	Not Cancellable
Declined	Cancellable
Dispatched	Cancellable
Enroute	Not Cancellable
Error	Cancellable
On Hold	Cancellable
Started	Not Cancellable
Queued for Dispatch	Cancellable
Scheduled	Cancellable
Suspended	Cancellable

Activity Types

An activity type defines the properties common to a specific type of activity.

To create an activity type:

1. Navigate to the **Activity Type** page from the **Admin** menu or from the **Search** menu.
2. Enter a task type and its description as appropriate.

The activity type includes the following:

Activity Type	Description
Field Activity	<p>Record Information: Business Object = Field Activity Type Related Transaction BO = Field Activity Activity Type Category = Field Activity</p> <p>To Do Information: Crew Request To Do Type = Activity To Do Type Crew Request To Do Role = System Default Role Appointment To Do Type = Appointment Notification Appointment To Do Role = System Default Role Field Cancellation To Do Type = Activity To Do Type Field Cancellation To Do Role = System Default Role</p> <p>Exception Handling: To Do Type = Activity To Do Type To Do Role = System Default Role Retry Frequency = 00:10:00 Maximum Retries = 2</p>

The Field Task types are available as part of the following extendable lookup.

Business Object: D1-FieldTaskTypeLookup

Description: Field Task Type

Adding Oracle Integration Cloud Certificates

Add the Oracle Integration for Cloud (OIC) certificate to the Oracle Utilities Customer To Meter stores where ever applicable to send transactions to the OIC layer.

Managing Catalog Services

The catalog service is used by Oracle Integration Cloud to communicate with the respective application. It is configured in Catalog URL in the Oracle Integration Cloud connection.

To configure the catalog service in Oracle Utilities Customer To Meter:

1. Login to Oracle Utilities Customer To Meter.
2. Navigate to the **Web Service Catalog** page either from the **Admin** menu or the **Search** menu.

The external system and inbound web services are added to the catalog.

3. To get the catalog URL, append “webservices/builtin/ServiceCatalog?wsdl” to the Oracle Utilities Customer To Meter URL.

For example: `http(s)://<C2M_HOST>:<C2M_PORT>/<ContextRoot>/webservices/builtin/ServiceCatalog?wsdl`

For more information about configuration, refer to the Oracle Utilities Customer To Meter documentation.

Chapter 4

Configuring Oracle Field Service Cloud

This chapter provides information about the necessary Oracle Field Service Cloud configurations. It focuses on the following:

- [Integrating Using OIC/ICS](#)
- [Configuring Oracle Field Service Cloud](#)

Prerequisite: Make sure the accelerator related configurations are complete in Oracle Field Service Cloud before proceeding with these. Download the accelerator package from My Oracle Support.

Integrating Using OIC/ICS

One of the ways of integrating the applications is through Oracle Integration Cloud (ICS/OIC). Oracle Integration Cloud creates an integration point in Oracle Field Service Cloud. When an event occurs in Oracle Field Service Cloud, it is sent to the appropriate application through Oracle Integration Cloud.

Note: Configure this integration only to send events or data from Oracle Field Service Cloud to Oracle Integration Cloud.

To configure the applications:

1. Login to Oracle Field Service Cloud.
2. Click **Configuration > Outbound Integration**.
3. On the **Outbound Integration** page, click **Add New Channel**.
4. From the **Channel Type** drop down list, select **Integration Cloud Service**.
5. Enter the name/description of the application for which the integration is created.

If multiple instances of an application are used, such as production and testing, create multiple access points for the application.

6. Enter the host name of the application for which the integration is created.

For example: If the URL is "https://integration-a12345.integration.us2.oraclecloud.com/integration/flowsvc/ofsccloudadapter/NAME/v01/" then the host is: "integration-a12345.integration.us2.oraclecloud.com".

7. Enter the user name of the Oracle Integration Cloud user.

Make sure this user exists in Oracle Integration Cloud and has permissions to access the integration endpoint.

8. Enter the password for the user name. The user name and password are used to authenticate Oracle Integration Cloud when Oracle Field Service Cloud starts sending events to Oracle Integration Cloud.
9. Confirm the password.
10. Click **OK**.

Configuring Oracle Field Service Cloud

This section provides information about the configurations in Oracle Field Service Cloud.

- [Creating Time Slots](#)
- [Creating Work Skills](#)
- [Creating Capacity Categories](#)
- [Designating Buckets for Capacity or Quota Management](#)
- [Adding Quota to Bucket](#)
- [Creating Plug-ins](#)

Creating Time Slots

Time slots define the availability of crew who can book based on the customer priority.

To define a time slot:

1. Click **Configuration > Time slots**.
2. On the **Time slots** page, click **Add New**.
3. Enter the appropriate information in the following fields:

Option	Description
Name	Name of the capacity category. The name is displayed in the list and in the quota matrix. If the application is configured for multiple languages, input boxes appear for each language.
Label	Specify a label. It is used in the context of APIs and should conform to a standard naming convention.
Active	Select the check box to mark the capacity category as 'active'. Only active capacity categories are used in the quota matrix.
Status	Mark the capacity category as 'active'. Only active capacity categories are used in the quota matrix.
Time from	Star time
Time To	End time

4. Select the work skill type and click **Add**.

Creating Work Skills

To create a work skill:

1. Click **Configuration > Work skills**.
2. On the **Time slots** page, click **Add New**.
3. On the **Work skills** page, enter the appropriate information in the fields:

Option	Description
Name	Name of the capacity category. The name is displayed in the list and in the quota matrix. If the application is configured for multiple languages, input boxes appear for each language.
Label	Specify a label. It is used in the context of APIs and should conform to a standard naming convention.
Active	Select the check box to mark the capacity category as 'active'. Only active capacity categories are used in the quota matrix.

4. Click **Work skill conditions**.

5. Select the work skill created in step 3.
6. On the **Work Skill Conditions** page, from the drop down box, select the work skill name created in step 4.
7. Select the required level as 1.
8. Select the preferable level as 1.
9. Click **Add New Condition**.
10. Select the **Activity Type** property and add the required activity types.

Creating Capacity Categories

A capacity category is a predefined set of work skills and/or work skill groups and time slots visible to a user booking the activities for the customers.

Based on the number of minutes available (Capacity = Initial quota allocation minus Used minutes), the user decides if enough time is available within a time slot to realistically promise a specific service window to the customer. This information is sent to the CSR via Capacity API. Capacity Categories are visible only if the Oracle Field Service Cloud Capacity Cloud Service module is used.

Note: The Used Minutes value is calculated based on the exact time (in minutes) from start to end of a working day.

You must enable the Capacity Categories visibility profile permission for each user to access the Capacity Categories window:

- Read-Only: Select this option to display capacity categories in a view only mode.
- Read/Write: Select this option to let the user manage Capacity Categories in Oracle Field Service Cloud.

If the permissions are not configured for a user type, the activity types will not be visible to the users. Oracle Field Service Cloud maps the work skills to assign incoming activities to the resources. In general, many companies define quota for a work skill group rather than for an individual work skill. For example: Separate skills are required for installation, un-installing and maintenance of modems, but from a scheduling perspective, quota is defined for all the modem-related works group.

A capacity category can also consist of a single work skill and the minimum required level of the skill level. For example: A category can be created for all the customer-oriented work and a separate group for VIP customers or for highly difficult tasks. The two categories would contain the same work skills but the minimal qualification level in the VIP group is higher. Because of the categories and the multi-skill functionality, the same activity can match several rows in the quota table and can be added to the used capacity several times. The duration of this activity will be taken into account for all the capacity categories it matches.

The operations performed on a capacity category are:

- [Creating a Capacity Category](#)
- [Modifying a Capacity Category](#)
- [Deleting a Capacity Category](#)
- [Adding/Editing Work Skills Within a Capacity Category](#)
- [Adding/Editing Time Slots Within a Capacity Category](#)

Creating a Capacity Category

To create a capacity category to configure work skills, work skill groups, and time slots:

1. Click **Configuration > Capacity Categories**.
2. On the **Capacity Categories** page, click **Add New**.
3. On the **Add Capacity Category** page, enter the appropriate information in the fields.

The following table describes the fields available on the **Add Capacity Category** page.

Option	Description
Name	Name of the capacity category. The name is displayed in the list and in the quota matrix. If the application is configured for multiple languages, input boxes appear for each language.
Label	Specify a label. It is used in the context of APIs and it must conform to a standard naming convention.
Active	Select to mark the capacity category as 'active'. Only active capacity categories are used in the quota matrix.

4. Click **Save**.

After creating the capacity category, add work skills, work skill groups, and time slots to the category.

Modifying a Capacity Category

To edit an existing capacity category:

1. Click **Configuration > Capacity Categories**.
2. On the **Capacity Categories** page, select the checkbox next to the capacity category to be modified.
3. Click the pencil icon in the **Name** column.
4. On the **Edit Capacity Categories** page, change the required fields.
5. Click **Save**.

Deleting a Capacity Category

To delete a capacity category when no longer needed:

1. Click **Configuration > Capacity Categories**.
2. On the **Capacity Categories** page, select the checkboxes next to the capacity categories to be deleted.
3. Click **Delete**.
4. Click **OK**.

Adding/Editing Work Skills Within a Capacity Category

A capacity category can contain one or more work skills and each work skill must meet a minimum required level.

To add/edit work skills within a capacity category:

1. Click **Configuration**.
2. In the **General** section, click **Capacity Categories**.
3. On the **Capacity Categories** page, click the pencil icon in the **Work Skills** column to add/edit the capacity categories.
4. On the **Edit Work Skill** page, select a work skill and add the minimum level of the skill required in the corresponding text box.

The default value is 1. When the minimum level of a work skill is defined, an activity matches a capacity category, if a required skill level for the activity skill is equal to or more than the level of the capacity category.

Note: If a capacity category contains a group of work skills, the activity matches the category if it requires at least one of work skills from the group.

Recalculate activities after any edits or updates have been made to apply changes to pending and future activities in the system.

Adding/Editing Time Slots Within a Capacity Category

A capacity category can contain one or more time slot associations.

To add/edit time slots within a capacity category:

1. Click **Configuration**.
2. In the **General** section, click **Capacity Categories**.
3. On the **Capacity Categories** page, click the pencil icon in the **Time Slots** column to add/edit the capacity category.
4. On the **Edit Time Slots** page, select a time slot.
5. Click **Save**.

Designating Buckets for Capacity or Quota Management

After adding a bucket, select whether to use it for capacity management or quota management. The selection is done on the **Resource Information** page.

1. Click the bucket name in the **Resource Tree**.
2. Select the **Quota Management** checkbox.

The routing profile, capacity categories, and time slots fields are displayed.

Adding Capacity Categories and Time Slots

If a bucket is designated as a capacity bucket used for quota calculation, the screen displays the capacity categories and time slots fields. The selections made here determine how the **Quota** section appears. Configuring capacity categories and time slots on a

bucket-by-bucket basis is helpful when different regions and types of resources within these buckets require different skills and time slots.

To add capacity categories and time slots:

1. Click the bucket name in the **Resource Tree**.
2. Select the **Quota Management** check box.
The routing profile, capacity categories, and time slots appear.
3. Select the time slots used for quota management in this bucket.
4. Click the pencil icon next to the Time Slots field to edit the time slots.
5. On the **Edit Time Slots** box, select the time slots to be used for quota management for this bucket.
6. Click **Save**.
7. Select the capacity categories used for quota management in this bucket.
8. Click the pencil icon next to the **Capacity Categories** field.
9. On the **Edit Capacity Categories** window, select the capacity categories used for quota management for this bucket. Click **Save**.
10. Select the level at which quota is defined in this bucket (day, time slot, capacity category).
This determines the visibility of the Day, Time slot, and Capacity Category tables in the Quota view.
11. Select the levels on which quota can be closed in this bucket.
Note that quota can also be closed by work zone.
12. Select the levels for which maximum capacity should be estimated.
Maximum capacity is the maximum number of minutes for activities booking. The application checks that the total duration of booked activities plus the total duration of other activities does not exceed maximum capacity.
13. Click **OK** to save the bucket information.

Adding Quota to Bucket

To add quota to bucket:

1. Navigate to **Bucket > Dispatch > Quota**.
2. Select **View filter by > Quota by Day**.
3. Provide the quota per the day values in minutes.
4. Select **Bucket > Dispatch > Quota**.
5. Select **View filter by > Time slots**.

Time Slot	Thursday, October 11th, 2018					
	Quota	Used	Used Quota, %	% when booking stops	Status	Close Time
Day					✓	
08-08:05					✓	
08-10					✓	
10-12					✓	
13-15					✓	
15-17					✓	
8:15-8:20					✓	
All-Day					✓	
Lunch break					✓	
Second Lunch Break					✓	

Add the quota for each time slot in minutes.

Creating Plug-ins

Prerequisite: Download the plug-in code from My Oracle Support.

This section focuses on:

- [Preparing a Plug-In for Upload](#)
- [Uploading a Plug-In](#)
- [Using an Action Link](#)

Preparing a Plug-In for Upload

Upload the plug-in in a specific format. Else, it should be hosted elsewhere.

The plug-in files must meet the following requirements:

- It should be a ZIP archive of the plug-in files.
- Only the files of following types can be uploaded:
 - .html
 - .css
 - .js
 - .jpg
 - .jpeg
 - .png
 - .gif
 - .svg
 - appcache
- The files can be organized in sub-directories, but the **index.html** file must be in the root folder.

- Each file can be a maximum of 1 MB and the total size of the compressed archive must be less than 500 KB.
- There can be a maximum of 10 files or directories in the archive.

Note: The plug-in files uploaded in Oracle Field Service Cloud are available by unique URLs on the Internet. The URLs are generated automatically and contain a long string. There is no authentication to access these files, so anyone who has the direct link to the file can download the file.

Therefore, do not store any sensitive information such as passwords or login names in the plug-in archive. If you do not want your code to be available without authentication, it is recommended to not use the hosted plug-in functionality.

Be aware that the communication between the plug-in and Oracle Field Service Cloud starts only when a user successfully logs in to Oracle Field Service Cloud.

Uploading a Plug-In

Upload the plug-in archive to use it as a hosted plug-in.

Uploading a plug-in includes:

1. Creating the name of the plug-in.
2. Uploading the plug-in archive.

To create the name of the plug-in:

1. Click **Configuration > Action Management > Hosted Plugins**.
2. On the **Hosted Plugins** page, click + icon at the list of existing hosted plug-ins.
3. In the **Add Hosted Plug-in** dialog box, enter the name of the plug-in.
4. Click **Add**.

This name is displayed when the plug-in is linked on the **Action Management** page. End users do not see the plug-in name.

To upload the archive:

1. Click **Browse** on the **Hosted Plugins** page and select the ZIP archive that is ready for upload.

The **Version history** section is populated with:

- The user name of the user that uploaded the files.
 - The date on which the archive is uploaded.
 - A link to download the archive.
2. To use the plug-in, add it to an action link. Refer to [Using an Action Link](#) for instructions to host a plug-in in an action link.

Using an Action Link

To use a hosted plug-in, add it to an action link and then add the action link to a screen using visual form editor. The name of the plug-in created in the Hosted plug-ins screen is added to an action link in the **Add** action link screen.

1. Login to Oracle Field Service Cloud.
2. Click **Configuration**.
3. In the **Displays** section, click **Action Management**.
4. On the **Action Management** page, click **Add Action** link.
5. On the **Add Action** link window, click **General**.
6. Complete the following fields.

Field	Description
Action name (English)	A mandatory field defining the action or plug-in name in the English language. The action or plug-in appears under this name in the actual context.
Action name (other languages)	Action or plug-in name translations to other languages, if used.
Action label	A mandatory field defining a unique action or plug-in label.
Entity	<p>Entity (activity, inventory, required inventory, resource, service request, user) to which the action or plug-in is to be related.</p> <p>For example: Select Inventory and the action appears only in the contexts related to inventory. Leave the field blank for the action to be available in all contexts of all the entities.</p> <p>Select Activity from the drop-down menu.</p>
Interface	The application interface (Manage or Mobility) in which the action is to be used. Hosted plug-ins work only in the Mobility interface.
Base action	<p>Base actions to be performed as a result of the custom action. The list of available base actions is filtered according to the Entity you have selected.</p> <p>For example: If you select required inventory for Entity, then Base action lists only the actions related to required inventory. The base action from which the plug-in is to be derived, if needed. When a base action is selected, the resulting plug-in functions per the same rules as the base action. It appears only in the contexts in which the base action appears and is shown or hidden according to the same visibility conditions.</p> <p>For example: If start_activity is selected as the base action for a plug-in, the plug-in is only shown in the context of a pending activity when there is no started activity in the same route, similar to the Start action.</p> <p>Do not select any Base action.</p>

Field	Description
Is Plugin	Whether the custom action is a plug-in. Select this check box. The Plug-in details tab is added to the Add/Edit action link window and the Custom params tab is no longer shown. Check this checkbox.

7. Complete the following fields in the **Plug-in detail** tab:

Field	Description
Type	The plug-in type. Select HTML5 application. This means, the plug-in uses an external application to extend the functionality. An HTML5 application plug-in can be used in one of the following Mobility contexts - Activity List, Edit, View Activity, Inventory Grid or Add/Details Inventory. Select only HTML5 Application.
Use Plug-in API	Determines if the plug-in works through a third-party Plug-in API or as a regular external plug-in. Select this check box.
Use hosted plugin	Defines whether you want to use a hosted plug-in. Select this check box.
Hosted plugin	The hosted plug-in that you want to use. Select the name from the drop-down menu. This field displays the names that you have created in the first step of the Upload a plug-in procedure.
Disable Action Link in Offline	Defines whether the plug-in is disabled in offline mode. Clear this check box if you want the plug-in to work in offline mode with Oracle Field Service Mobility Cloud Service.
Secure parameters	The secure information such as user name and password used to access a third-party service through HTTP. For example: A third-party map service. This data is encrypted and stored. Use the plus icon to add a new key-value pair. You can add a maximum of 20 key-value pairs, after which the icon is hidden. The maximum size of the parameters allowed is 5 KB. This size includes the data structure overhead and doesn't correspond to the length of keys and values of strings. Changes to the secure data are sent to Oracle Field Service Mobility Cloud Service during the next synchronization. The data is sent to the plug-in when the next message is sent.

8. Create the below secure parameters and provide the appropriate values.

Note: Make sure the parameter names are as provided in the table below.

Parameter	Value
url	Device Verification OIC activated URL Example: https://hostname:port/ic/api/integration/v1/flows/rest/DEVICE_VERIFICATI_OFSCITOSOM/1.0/ Note: Replace host and port values with the respective OIC details.
uname	User name of the OIC instance
pwd	Password of OIC instance

9. On the **Add link** window, click **OK**.

Chapter 5

Importing, Configuring, and Testing Integration Connections

This chapter explains in details the process for importing the connections, packages, and files needed for the integration and the configuration of these connections imported through the packages. After a successful import and configuration the chapter lists out steps to help test the connections. It includes the following sections:

- [Importing the Oracle Integration Cloud Package from Oracle Cloud Marketplace](#)
- [Verifying the Package Import](#)
- [Configuring Connections in Oracle Integration Cloud](#)
- [Configuring Agent \(if applicable\)](#)
- [Setting up Certificates for Security](#)

Importing the Oracle Integration Cloud Package from Oracle Cloud Marketplace

All integration points are shipped as part of single package (.par) file.

To import a pre-built integration from Oracle Cloud Marketplace:

1. Launch the Oracle Cloud Marketplace portal.

https://cloudmarketplace.oracle.com/marketplace/en_US/homePage.jspx

2. Click **Applications**.
3. Browse through the list of applications and select the pre-built integration package to import.
4. When prompted, select the server where the pre-built integration file should be uploaded.

The pre-built integration is imported as a package file that is visible on the **Packages** page in Oracle Integration Cloud.

5. On the **Integrations** page, the individual integrations of the imported package file that are designated with a BUILT BY ORACLE message are displayed.

To import a package in Oracle Integration Cloud:

1. Login to Oracle Integration Cloud.
2. Navigate to **Integrations > Designer > Packages**.
3. Click **Import**.
4. Select the .par file downloaded from Oracle Cloud Marketplace.
5. Verify if the package is imported is successfully.

Verifying the Package Import

To verify the package import was successful:

1. Verify whether the following integrations are imported successfully.
 - PROCESS_ACTIVITY_SOMTOOFSC
 - GET_APPOINTMENT_SOMTOOFSC
 - GET_ACTIVITYST_SOMTOOFSC
 - DEVICE_VERIFICATI_OFSCSOSOM
 - CREATE_ACTIVITY_OFSCSOSOM
 - COMPLETE_ACTIVITY_OFSCSOSOM
2. Verify if the following connections are in place.
 - UAC_SOM
 - OFSC
 - REST_OFSCOutbound

- REST_OFSCAppointment
3. Make sure that the following look ups are imported successfully.
 - SOMOFSC_ActivityType.dvm
 - OFSCSOM_Appt_Timeslots.dvm
 - SOMOFSC_LifeSupport.dvm
 - SOMOFSC_ConfigProps.dvm
 - SOMOFSC_Email_ID.dvm
 - SOMOFSC_CountryCode.dvm
 - SOMOFSC_Model.dvm
 - OFSCSOM_MeterStatus.dvm
 - SOMOFSC_MeterLocation.dvm
 - SOM_TimeZone.dvm
 - SOMOFSC_ServiceInstructions.dvm
 - SOMOFSC_ServiceWarnings.dvm
 - SOMOFSC_DisconnectLocation.dvm
 - SOMOFSC_Manufacturer.dvm
 - OFSCSOM_ActionCode.dvm
 - SOMOFSC_MeterConfigurationType.dvm
 - OFSC_TimeZone.dvm
 - SOMOFSC_InterimStatus.dvm
 - SOMOFSC_TimeZone.dvm
 - OFSCSOM_StatusReason.dvm

Configuring Connections in Oracle Integration Cloud

After the packages are imported and verified, the respective connections have to be configured.

This section describes the procedure to set up the connections.

Configuring UAC_SOM Connection

This connection is used to communicate with Oracle Utilities Customer To Meter/ Oracle Utilities Service Order Management using the Oracle Utilities adapter.

To configure the UAC_SOM connection:

1. Add the Oracle Utilities Customer To Meter/Oracle Utilities Service Order Management catalog to the **catalogURL** section.
2. On the **Security policy** tab, select the **User Name and Password** token policy.

3. On the **Connection** page, enter the user name and password and then click **Test** at the upper-right corner.
4. After the connection is tested successfully, click **Save**.

Configuring REST_Outbound Connection

This connection is used to communicate with OFSC using the REST adapter.

Edit the REST_Outbound connection and test it to make sure it is successful. Click **Save**.

Configuring OFSC Connection

This connection is used to communicate with OFSC using the OFSC adapter.

Configure the OFSC connection with the required details:

1. Enter the API URL in the **Field Service Cloud API URL** field.
2. Enter the **Instance ID**.
3. From the **Security Policy** drop-down list, select **Basic Authentication**.
4. On the **Connection** page, enter the user name and password and then click **Test** at the upper-right corner.
5. After the connection is tested successfully, click **Save**.

Configuring REST_OFSCAppointment Connection

This connection is used to communicate with the ActivityBooking API using the REST adapter.

Configure the REST_OFSCAppointment Connection with required details:

1. From the **Connection Type** drop-down box, select **REST API Base URL**.
2. Select the **TLS Version** as **TLSV1.2**.
3. Enter **https://api.etadirect.com/rest/ofscCapacity/v1/** in the **Connection URL** field.
4. From the **Security Policy** drop-down list, select **Basic Authentication**.
5. On the **Connection** page, enter the user name and password and then click **Test** at the upper-right corner.
6. After the connection is tested successfully, click **Save**.

Configuring Agent (if applicable)

Create an agent group in Oracle Integration Cloud and install agent on the on-premises server before creating/activating an integration in which messages are exchanged between the on-premises applications and Oracle Integration Cloud. The agent related configurations are needed only if the server points to an on-premises application.

This section includes:

- [Possible Combinations](#)
- [Creating an Agent Group](#)
- [Downloading Agent Installer](#)
- [Installing On-Premises Agent](#)

Possible Combinations

The possible combinations of an agent group are

- Oracle Utilities Customer To Meter on cloud and Oracle Field Service Cloud
- Oracle Utilities Customer To Meter on-premises and Oracle Field Service Cloud

Creating an Agent Group

Create an agent group in Oracle Integration Cloud before running the agent installer. When the on-premises agent is installed in the environment, the on-premises agent is associated with the agent group identifier. Only one on-premises agent can be associated with an agent group.

For a single Oracle Integration Cloud instance, you can create up to five agent groups. Creating the agent group also creates the necessary queues required for message exchange.

To create an agent group:

1. Login to Oracle Integration Cloud.
 2. On the **Home** page, click **Agents**.
 3. Click **Create Agent Group**.
 4. Enter the following information:
 - Agent Group Name
 - Identifier
- Note:** The agent group name and identifier must be same.
- Agent Type: “Connectivity Agent”
 - Description
5. Click **Create**.

Downloading Agent Installer

Download the agent installer from Oracle Integration Cloud and run the installer to install the on-premises agent in your local environment. During the installation, associate the agent with the Agent Group Identifier generated when creating an agent group in Oracle Integration Cloud.

For more information on agent installer, see <https://docs.oracle.com/en/cloud/paas/integration-cloud/integrations-user/downloading-and-running-premises-agentinstaller.html>.

Installing On-Premises Agent

To install an on-premises agent:

1. Login to Oracle Integration Cloud.
2. On the **Home** page, click **Agents**.
3. Click **Download**.
4. Select **Connectivity Agent**.
5. Select **Save File** when prompted to save the file to a directory location on your on-premises host.
6. Navigate to that directory and unzip **oic_connectivity_agent.zip**.
7. Change the file permissions to be executable.
8. Modify **InstallerProfile.cfg** to include the following information.
 - a. Set the JAVA_HOME property to the directory/folder where JDK is installed.
 - b. Run the connectivity agent installer from the command prompt.
 - c. Provide the Oracle Integration Cloud credentials when prompted.
 - d. Wait for a successful installation message to appear.
9. Navigate to the **Agent Groups** page.
10. Check if the agent count increased by one.
11. Click the number to view the agent details.
12. To install an on-premises agent: # Required Parameters # oic_URL format should be `https://hostname:sslPort oic_URL=https://icshost:sslport agent_GROUP_IDENTIFIER= #Proxy Parameters proxy_HOST= proxy_PORT= proxy_USER= proxy_PASSWORD= proxy_NON_PROXY_HOSTS= java -jar connectivityagent.jar`

After the installation is complete, an agent instance is created to interact with Oracle Integration Cloud.

To verify if the agent instance was created:

1. Navigate to the **Agent Groups** page.
2. Check if the agent count increased by one.
3. Click the number to view the agent details.

For more details, refer to Oracle Integration Cloud documentation at <https://docs.oracle.com/en/cloud/paas/integration-cloud-service/index.html>.

Setting up Certificates for Security

Important! Please skip this section if there are valid CA certificates for the integration.

If there no valid certificates for this integration, download the Oracle Utilities Customer To Meter certificates and upload them to Oracle Integration Cloud to handshake with Oracle Utilities Customer To Meter.

To download the Oracle Utilities Customer To Meter certificate:

1. Login to Oracle Utilities Customer To Meter.
2. Click the URL on the top-left corner.
3. On the **Security** tab, click **View Certificate**.
4. On the **Details** tab, click **Export**.
5. Save the certificate.

To upload the certificate to Oracle Integration Cloud:

1. Login to Oracle Integration Cloud with Admin credentials.
2. Navigate to **Settings > Certificates**.
3. On the **Certificate** window, click **Upload**.
4. Select **Certificate Type** as **Trust Certificate**.
5. Provide the **Certificate Alias Name**.
6. Select the certificate to upload.
7. Click **Upload**.

Chapter 6

Configuring Lookups, Error Handling, and Email Notifications

This chapter focuses on the lookups configuration, handling business and technical errors, sending email notifications, and customizations in this integration. It includes the following sections:

- [Configuring Lookups](#)
- [Error Handling](#)
- [Email Notifications](#)

Configuring Lookups

The following table lists the lookups that are part of this integration.

Lookup Name	Integration Name	Purpose
OFSCSOM_ActionCode	Complete_Activity_OFSC ToSOM	Translates the OFSC status to corresponding SOM action Code
SOMOFSC_ActivityType	Complete_Activity_OFSC ToSOM	Translates SOM Activity type to OFSC Activity type
	Get_Appointment_SOMT oOFSC	
	Process_Activity_SOMTo OFSC	
SOMOFSC_ConfigProps	Create_Activity_OFSCToS OM	
	Complete_Activity_OFSC ToSOM	Used for configurable properties
	Get_Appointment_SOMT oOFSC	
	Process_Activity_SOMTo OFSC	
SOMOFSC_InterimStatus	Get_ActivityStatus_SOMT oOFSC	Translates activity status in OFSC to status in SOM/C2M
	Process_Activity_SOMTo OFSC	
	Complete_Activity_OFSC ToSOM	
SOMOFSC_TimeZone	Process_Activity_SOMTo OFSC	Translates SOM time zone to OFSC time zone
OFSC_TimeZone	Complete_Activity_OFSC ToSOM	Represents OFSC time zone and offset
SOMOFSC_MeterConfigurationType	Process_Activity_SOMTo OFSC	Translates SOM meter configuration type to OFSC meter configuration type
	Complete_Activity_OFSC ToSOM	
SOMOFSC_Manufacturer	Complete_Activity_OFSC ToSOM	Translates SOM Manufacture to OFSC Manufacture
	Process_Activity_SOMTo OFSC	

Lookup Name	Integration Name	Purpose
SOMOFSC_DisconnectLocation	Process_Activity_SOMToOFSC Complete_Activity_OFSCToSOM	Translates SOM disconnect location to OFSC disconnect location
SOMOFSC_ServiceWarnings	Process_Activity_SOMToOFSC Complete_Activity_OFSCToSOM	Translates SOM Service Warnings to OFSC Warnings
SOMOFSC_ServiceInstructions	Complete_Activity_OFSCToSOM Process_Activity_SOMToOFSC	Translates SOM Service Instruction to OFSC Instruction
SOM_TimeZone	Complete_Activity_OFSCToSOM	Represents SOM time zone and offset
SOMOFSC_MeterLocation	Process_Activity_SOMToOFSC Complete_Activity_OFSCToSOM	Translates SOM Meter Location to OFSC Meter Location and vice versa
OFSCSOM_MeterStatus	Complete_Activity_OFSCToSOM	Translates SOM Meter Status to OFSC Meter Status and vice versa
SOMOFSC_Model	Process_Activity_SOMToOFSC Complete_Activity_OFSCToSOM	Translates SOM Meter Model to OFSC Meter Model and vice versa
SOMOFSC_CountryCode	Process_Activity_SOMToOFSC Create_Activity_OFSCToSOM	Translates SOM Country Code to OFSC Country Code and vice versa
SOMOFSC_Email_ID	Process_Activity_SOMToOFSC Complete_Activity_OFSCToSOM Get_Appointment_SOMToOFSC Create_Activity_OFSCToSOM	Configures the email IDs of respective user
SOMOFSC_LifeSupport	Process_Activity_SOMToOFSC	Translates the life support codes from SOM to OFSC

Lookup Name	Integration Name	Purpose
OFSCSOM_Appt_Timeslots	Process_Activity_SOMTo OFSC Get_Appointment_SOMTo oOFSC	Translates OFSC time slots to SOM time slots and vice versa
OFSCSOM_StatusReason	Complete_Activity_OFSCToSOM	Translates OFSC cancel reason to SOM.statusReason field

Editing Lookups

To edit a lookup:

1. Login to Oracle Integration for Cloud.
2. Navigate to **Integrations > Designer > Lookups**.
3. Select the look up to edit.
4. Click **Save**.
5. Deactivate the integration using the edited DVM.
6. Activate the deactivated integration for the changes to reflect.

Error Handling

This section provides information about the different ways used to handle errors in the integration and also resubmitting the instances after rectifying the errors.

- [Error Handling Ways](#)
- [Resubmitting the Error Instances in Oracle Integration Cloud](#)

Error Handling Ways

In this integration, the errors are handled in different ways due to the limitation of Oracle Integration Cloud.

- [Synchronous Flow Error Handling](#)
- [Asynchronous Flow Error Handling](#)

Synchronous Flow Error Handling

As part this error handler the errors are sent back to the respective system in the same flow.

Technical Fault

This fault occurs when there is a data mismatch or any Xpath related error. On this error, the flow immediately goes to global fault handler and the fault is sent back to the respective system.

Remote Fault

This fault occurs when the target system is down. When this error occurs the flow immediately goes to global fault handler and the fault is sent back to the respective system.

Business Fault

This fault occurs only when the business fault occurs in the target system due to invalid data. When this error occurs the fault is sent back to the respective system as part of immediate response.

Asynchronous Flow Error Handling**Technical Fault**

This fault occurs when there is a data mismatch or any Xpath related error. When this error occurs, the flow immediately goes to global fault handler and an optional email to the respective user is sent.

Remote Fault

This fault occurs when the target system is down. When this error occurs, the flow immediately goes to global fault handler and an optional email is sent to the respective user.

Business Fault

This fault occurs only when the business fault occurs in the target system due to invalid data. When this error occurs the flow immediately goes to global fault handler and an optional email is sent to the respective user.

Resubmitting the Error Instances in Oracle Integration Cloud

In this integration, the flows initiated by Oracle Field Service Cloud are asynchronous flows, and the resubmit option is available only for asynchronous flows.

To resubmit the error instances in Oracle Field Service Cloud:

1. Login to Oracle Field Service Cloud.
2. Navigate **Integrations > Monitoring > Errors**.
3. Select the integration to resubmit.
4. Click the **Resubmit** icon.

Email Notifications

This pre-built integration includes a configurable email notification.

To receive an email notification:

1. Login to Oracle Integration Cloud.
2. Navigate to **Integrations > Designer > Lookups**.
3. Edit the **SOMOFSC_ConfigProps** look up.
 - a. Change the **email.flag** property value to 'true'.

- b. Open the **SOMOFSC_Email_ID** look up.
- c. In the **From** field, enter the email ID to receive an email from.
- d. In the **To** field, enter the email ID to send the email to.

Chapter 7

Customizations

This chapter describes options for customizing the integration to meet specific business requirements, including:

- [Mapping Extra Elements](#)

Mapping Extra Elements

To add mapping for extra elements in Oracle Integration Cloud created in application schema, the pre-built integration provides a customization template for all the integration flows.

Integration Name	Location of XSL File
PROCESS_ACTIVITY_SOMTOOFSC (Create Request)	PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\icspackage\project\PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\resources\processor_464\resourcegroup_467\req_29b57e613bbe4c8eb2850866951ce1da.xsl
PROCESS_ACTIVITY_SOMTOOFSC (Cancel Response)	PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\icspackage\project\PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\resources\processor_474\resourcegroup_477\req_ae404868fb9e4907a86975bbdb75e1fa.xsl
PROCESS_ACTIVITY_SOMTOOFSC (Cancel Request)	PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\icspackage\project\PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\resources\processor_430\resourcegroup_433\req_d6b0de6e354d44cf8e0768249b5fa66c.xsl
PROCESS_ACTIVITY_SOMTOOFSC (Update Response XSL)	PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\icspackage\project\PROCESS_ACTIVITY_SOMTOOFSC_01.00.0000\resources\processor_469\resourcegroup_472\req_2c143905deba4c4891091d048bfcb28.xsl
DEVICE_VERIFICATION_OFSCITOSOM	DEVICE_VERIFICATI_OFSCITOSOM_01.00.0000\icspackage\project\DEVICE_VERIFICATI_OFSCITOSOM_01.00.0000\resources\processor_19\resourcegroup_22\req_9de4224508dc47c49bea25adef82afcb.xsl
CREATE_ACTIVITY_OFSCITOSOM	CREATE_ACTIVITY_OFSCITOSOM_01.00.0000\icspackage\project\CREATE_ACTIVITY_OFSCITOSOM_01.00.0000\resources\processor_201\resourcegroup_204\req_822ee98b7e5c4218aaec5b792acc293e.xsl
COMPLETE_ACTIVITY_OFSCITOSOM (Response)	COMPLETE_ACTIVITY_OFSCITOSOM_01.00.0000\icspackage\project\COMPLETE_ACTIVITY_OFSCITOSOM_01.00.0000\resources\processor_509\resourcegroup_512\req_358b3cdb3d5745fb8e082acd659bb2.xsl

Integration Name	Location of XSL File
COMPLETE_ACTIVITY_OFSC2OSOM (Request)	COMPLETE_ACTIVITY_OFSC2OSOM_01.00.0000\icspackage\project\COMPLETE_ACTIVITY_OFSC2OSOM_01.00.0000\resources\processor_498\resourcegroup_501\req_ba1590b8d800422288223460af82f0e4.xsl
GET_APPOINTMENT_SOMTOOFSC	GET_APPOINTMENT_SOMTOOFSC_01.00.0000\icspackage\project\GET_APPOINTMENT_SOMTOOFSC_01.00.0000\resources\processor_75\resourcegroup_78\req_6afff84a472440fcbd8222d1adcfbd6e.xsl GET_APPOINTMENT_SOMTOOFSC_01.00.0000\icspackage\project\GET_APPOINTMENT_SOMTOOFSC_01.00.0000\resources\processor_80\resourcegroup_83\req_3636a98aa4a44cae8cdb99ef4f5d5f55.xsl
GET_ACTIVITYST_SOMTOOFSC	GET_ACTIVITYST_SOMTOOFSC_01.00.0000\icspackage\project\GET_ACTIVITYST_SOMTOOFSC_01.00.0000\resources\processor_18\resourcegroup_21\req_93d5d20a9bbc4a51800246d1af17262c.xsl GET_ACTIVITYST_SOMTOOFSC_01.00.0000\icspackage\project\GET_ACTIVITYST_SOMTOOFSC_01.00.0000\resources\processor_65\resourcegroup_68\req_ea1951b8286e459a92eab6c39b42d525.xsl GET_ACTIVITYST_SOMTOOFSC_01.00.0000\icspackage\project\GET_ACTIVITYST_SOMTOOFSC_01.00.0000\resources\processor_82\resourcegroup_85\req_2770ed549fbe410eb3f0f7d87a56f2a5.xsl GET_ACTIVITYST_SOMTOOFSC_01.00.0000\icspackage\project\GET_ACTIVITYST_SOMTOOFSC_01.00.0000\resources\processor_35\resourcegroup_38\req_3b615b7222fc48648a2a594ee69c797a.xsl

Chapter 8

Activating and Testing the Integration Flows

This section provides an overview of how integration flows are activated and tested. It includes the following sections:

- [Activating Integration Flows](#)
- [Testing the Integration Flows](#)

Activating Integration Flows

To activate the integration flows:

1. Navigate to the integration to activate.
2. Drag the slider for that integration. When prompted to enable tracing, click **Yes** to view the instances.
3. Click **Activate**.

The integration takes time to get activated. The activated integration appears at the top of the integrations list.

Note: Make sure the catalog in Oracle Utilities Customer To Meter is configured completely to activate an integration process.

The following table shows a list of integrations and the respective activated end point URL samples.

Integration Name	Sample Activated End Point URL
Process_Activity_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/PROCESS_ACTIVITY_SOMTOOFSC/1.0/?wsdl
Create_Activity_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/ofsccloudadapter/CREATE_ACTIVITY_OFSCOTOSOM/1.0/notify
Complete_Activity_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/ofsccloudadapter/COMPLETE_ACTIVITY_OFSCOTOSOM/1.0/notify
Get_Appointment_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/GET_APPOINTMENT_SOMTOOFSC/1.0/?wsdl
Get_ActivityStatus_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/GET_ACTIVITYST_SOMTOOFSC/1.0/?wsdl
Device_Verification_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/rest/DEVICE_VERIFICATI_OFSCOTOSOM/1.0/?u_meter2_number=[u_meter2_number-value]&u_service_pt_id=[u_service_pt_id-value]&u_new_item_nbr=[u_new_item_nbr-value]

Testing the Integration Flows

The following table lists the end point URLs for respective applications. Configure the integrations and perform an end-to-end testing.

Integration Name	End Point URL to be Configured	Application to be Configured
Process_Activity_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/PROCESS_ACTIVITY_SOMTOOFSC/1.0	C2M
Create_Activity_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/ofsccloudadapter/CREATE_ACTIVITY_OFSCToSOM/1.0/notify	As OFSC is event based, there is no need to configure the integration endpoint URLs. Subscription for the event will be created once the respective integration is activated.
Complete_Activity_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/ofsccloudadapter/COMPLETE_ACTIVITY_OFSCToSOM/1.0/notify	As OFSC is event based, there is no need to configure the integration endpoint URLs. Subscription for the event will be created once the respective integration is activated.
Get_Appointment_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/GET_APPOINTMENT_SOMTOOFSC/1.0/	C2M
Get_ActivityStatus_SOMToOFSC	https://hostname:port/ic/ws/integration/v1/flows/oracleutilities/GET_ACTIVITYST_SOMTOOFSC/1.0/	C2M
Device_Verification_OFSCToSOM	https://hostname:port/ic/api/integration/v1/flows/rest/DEVICE_VERIFICATI_OFSCToSOM/1.0/	OFSC

Chapter 9

Monitoring and Troubleshooting

This section provides information about monitoring and troubleshooting the integration. It includes the following sections:

- [Oracle Utilities Customer To Meter](#)
- [Oracle Integration Cloud](#)

Oracle Utilities Customer To Meter

This section provides information about monitoring Oracle Utilities Customer To Meter.

Oracle Utilities Customer To Meter Error Logs

Monitoring the error logs is possible only in on-premises applications. Applications on cloud cannot access the error logs.

The following error logs can be monitored for Oracle Utilities Customer To Meter:

- Errors related to the online integration invocation from Oracle Utilities Customer To Meter are stored in the C2M_ENVIRONMENT_NAME/logs/system folder.

For example: V27_C2M_ORA_WLS/logs/system\

For more information about errors and notifications, see the Oracle Utilities Customer To Meter documentation.

Oracle Integration Cloud

This section focuses on the monitoring Oracle Integration Cloud and troubleshooting any issues that occur during the integration activation.

Monitoring Integration Flows

Integration flows are monitored using the following:

- Dashboard
- Cloud Logs

To monitor the integration flows from the Oracle Integration Cloud dashboard:

1. Login to Oracle Integration Cloud.
2. On the **Home** page, click **Monitoring**.
3. Select any of the following as required:
 - **Dashboards** - To monitor the complete dashboard of integration.
 - **Integrations** - To monitor each integration.
 - **Tracking** - To monitor instance and flow trace/activity stream of the integration.
 - **Error** - To monitor the integrations in 'error' state. Re-submit the asynchronous integration flows.

To monitor the integration flows using Oracle Integration Cloud logs:

1. Login to Oracle Integration Cloud.
2. On the **Home** page, click **Monitoring**.

3. On the navigation pane, click **Dashboards** to view the overall success/failure rate of the integration.
4. Navigate to the **Logs** menu.
5. In the right pane, click the link to show options for downloading the Oracle Integration Cloud logs or diagnostics logs.
6. In case of any issues, attach the diagnostic logs to a service request for help.

Troubleshooting

If an activation fails, the Integrations page displays an error message.

To troubleshoot the activation error:

1. Click **Download Diagnostic Logs** to download the logs for diagnosing the issue.
2. Select **Enable Tracing**.

TRACE ENABLED is displayed next to ACTIVE.

For any connectivity errors while activating the integration, make sure the trigger connection is successful. Test the connection and refresh the metadata, and then activate the integration.

If the integration (Oracle Utilities Customer To Meter/Oracle Utilities Service Order Management initiated flows) is activated for the first time, ensure the Oracle Utilities Customer To Meter catalog is configured accurately.

If an entry is added/edited in a lookup, deactivate the integration and then activate it. The changes will be reflected.

Below is an issue and the respective workaround to resolve that issue.

Issue: The response from Oracle Field Service Cloud/Oracle Integration Cloud is not seen in Oracle Utilities Customer To Meter, when the activity is created.

Solution: This is applicable only for customer on Oracle Integration Cloud below version 18.4.1. It is not applicable on higher versions.

1. Apply the following response XSL on all the outbound message types related to this integration.
2. Save the following snippet as XSL (RemoveRootElementAndNamespace.xsl) and copy it to the Oracle Utilities Customer To Meter server.

`$SPL_HOME/splapp/xai/schemas`

Note: SPL_HOME is the installation path on the server where Oracle Utilities Customer To Meter is installed.

```
<?xml version="1.0"?>
<xsl:stylesheet version="1.0" xmlns:mime="http://
schemas.xmlsoap.org/wsdl/mime/" xmlns:xsl="http://www.w3.org/1999/
XSL/Transform">
  <xsl:template match="/*">
    <xsl:apply-templates select=".*" mode="copy"/>
  </xsl:template>
```

```
<xsl:template match="*" mode="copy">
  <xsl:element name="{local-name()}">
    <xsl:apply-templates mode="copy"/>
  </xsl:element>
</xsl:template>
</xsl:stylesheet>
```

Appendix A

Data Mapping

This appendix provides mapping details for each integration point, including the following:

- [Activity Completion](#)
- [Activity Status](#)
- [Appointment Request](#)
- [Device Verification](#)
- [Pickup Orders Create](#)
- [Process Activity](#)

Activity Completion

This section describes data mapping for the following:

- [Activity Completion Request Mapping](#)
- [Activity Completion Response Mapping](#)

Activity Completion Request Mapping

Activity Completion Request Mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Complete Request Message			Oracle Field Service Cloud Get Activity Request Message			DVM Mapping	
Element Name	Parent Element	Type	Element Name	Parent Element	Type	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
events.definitions.activityEvent			TemplateParameters				
activityId	activityDetails		activityId				

Activity Completion Response Mapping

The Activity Completion Response Mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
activities.definitions.getActivitySchema	activities.definitions.getActivitySchema		D1-FieldActivityIBComm	D1-FieldActivityIBComm				
			communicationId	D1-FieldActivityIBComm				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			communicationType	D1-FieldActivityIBComm				
			bo	D1-FieldActivityIBComm				
			boStatus	D1-FieldActivityIBComm				
			statusReason	D1-FieldActivityIBComm				
			sender	D1-FieldActivityIBComm				
			statusDateTime	D1-FieldActivityIBComm				
			creationDateTime	D1-FieldActivityIBComm				
			version	D1-FieldActivityIBComm				
			initiatingOutCommunication	D1-FieldActivityIBComm				
			amiDeviceIdentifierNumber	D1-FieldActivityIBComm				
			deviceId	D1-FieldActivityIBComm				
			retryDetails	D1-FieldActivityIBComm	Group			

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			retryDateTime	retryDetails				
			numberOfRetries	retryDetails				
			currentErrorState	retryDetails				
			isToDoEntrySuppressed	retryDetails				
			transactionId	D1-FieldActivityIBComm				
			spId	D1-FieldActivityIBComm				
			completionDetail	D1-FieldActivityIBComm	Group			
			completionEventId	completionDetail				
			bo	completionDetail				
			activityId	completionDetail				
			boStatus	completionDetail				
			sequence	completionDetail				
			inboundCommunicationId	completionDetail				
			outboundCommunicationId	completionDetail				
			createDateTime	completionDetail				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			updateStatusDateTim e	completionDetail				
			statusReason	completionDetail				
			completionEventDat aArea	completionDetail				
			version	completionDetail				
			spId	completionDetail				
			eventDateTime	completionDetail				
			servicePointCompleti onDetails	D1- FieldActivityIBComm				
			disconnectLocation	servicePointCompleti onDetails				
			servicePointDataDeta ils	servicePointCompleti onDetails				
			spId	servicePointDataDetai ls				
			disconnectLocation	servicePointDataDetai ls				
			spInstruction	servicePointDataDetai ls				
			spWarning	servicePointDataDetai ls				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			spInstructionDetails	servicePointDataDetails				
			messageCompletionInformation	messageCompletionInformation				
			completionStatus	messageCompletionInformation				
			statusReason	messageCompletionInformation				
			completedByCrew	messageCompletionInformation				
			statusReasonDescription	messageCompletionInformation				
			statusReasonUsage	messageCompletionInformation				
			existingDevice					
			deviceCompletionDetails	existingDevice				
			deviceDataDetails	deviceCompletionDetails				
			deviceConfigurationType	deviceDataDetails				
			deviceLocation	deviceDataDetails				
			meterId	deviceDataDetails				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			badgeNumber	deviceDataDetails				
			manufacturer	deviceDataDetails				
			model	deviceDataDetails				
			readingCompletionDetails		Group			
			readingDateTime	readingCompletionDetails				
			readingDetails	readingCompletionDetails				
			readingDetailsList	readingDetails				
			seqNo	readingDetailsList				
			uom	readingDetailsList				
			tou	readingDetailsList				
			reading	readingDetailsList				
			newDevice	completionDetail				
			deviceCompletionDetails	newDevice				
			deviceDataDetails	deviceCompletionDetails				
			deviceConfigurationType	deviceDataDetails				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			deviceLocation	deviceDataDetails				
			meterId	deviceDataDetails				
			badgeNumber	deviceDataDetails				
			manufacturer	deviceDataDetails				
			model	deviceDataDetails				
			readingCompletionDetails					
			readingDateTime	readingCompletionDetails				
			readingDetails	readingCompletionDetails				
			readingDetailsList	readingDetails				
			seqNo	readingDetails				
			uom	readingDetails				
			tou	readingDetails				
			reading	readingDetails				
			itemCompletionDetails	newDevice				
			itemDataDetails	itemCompletionDetails				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			deviceConfigurationType	itemDataDetails				
			deviceLocation	itemDataDetails				
	activityChanges		itemId	itemDataDetails				
	activityChanges		badgeNumber	itemDataDetails				
	activityChanges		manufacturer	itemDataDetails				
	activityChanges		model	itemDataDetails				
			responseDetail					
			message	responseDetail				
			taskId	responseDetail				
apptNumber	activities.definitions.getActivitySchema		hostExternalId	responseDetail				
activityType	activities.definitions.getActivitySchema		taskType	responseDetail		SOMOFSC_ActivityType.dvm	OFSC_ActivityType	SOM_TaskType
status	activities.definitions.getActivitySchema		completionStatus	responseDetail		OFSCSOM_ActionCode.dvm	OFSC_ActivityStatus	SOM_ActionCode
endTime	activities.definitions.getActivitySchema		completionDateTime	responseDetail				
resourceId	activities.definitions.getActivitySchema		completedByCrew	responseDetail				
			messageId	responseDetail				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			language	responseDetail				
			completionInformation	responseDetail	Group			
ACTIVITY_NOTES	activities.definitions.getActivitySchema		comments	completionInformation				
			dispatchDateTime	completionInformation				
			enrouteDateTime	completionInformation				
			onsiteDateTime	completionInformation				
			arriveDateTime	completionInformation				
			customerContactDetails	completionInformation				
			customerContactType	customerContactDetails				
			customerContactComments	customerContactDetails				
			ToDoMessage					
			remarkTypes		Group			
			remarkTypesList	remarkTypes	List			
			remarkType	remarkTypesList				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			utilityCompletionInformation					
			servicePointCompletionDetails	remarkTypesList				
u_disconnect_location			disconnectLocation					
u_SP_warnings			modifyButtonClicked					
u_SP_instructions			servicePointDataDetails					
u_SP_instruction_details			disconnectLocation	servicePointDataDetails				
			serviceWarnings	servicePointDataDetails				
u_service_pt_id	activities.definitions.getActivitySchema		serviceInstructions	servicePointDataDetails				
			instructionDetails	servicePointDataDetails				
			serviceAgreementStatus	servicePointDataDetails				
			servicePointId	servicePointDataDetails				
			serviceAgreementId	servicePointDataDetails				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			premiseId	servicePointDataDetails				
			existingDevice	utilityCompletionInformation				
			meterCompletionDetails	existingDevice	Group			
			verificationDetails	meterCompletionDetails				
			verificationOverride	verificationDetails				
			response	verificationDetails	Group			
			verificationStatus	response				
			meterConfigurationType	response				
			errorCode	response				
			errorText	response				
			readingDetails	response				
			readingDetailsList	readingDetails	List			
			readSequence	readingDetailsList				
			unitOfMeasure	readingDetailsList				
			timeOfUse	readingDetailsList				
			numberOfDials	readingDetailsList				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			numberOfDecimals	readingDetailsList				
			upperLimit	readingDetailsList				
			lowerLimit	readingDetailsList				
			reading	readingDetailsList				
			overrideReading	readingDetailsList				
			meterDataDetails	meterCompletionDetails				
u_meter1_number	activities.definitions.getActivitySchema		badgeNumber	meterDataDetails				
u_meter1_mfg	activities.definitions.getActivitySchema		deviceManufacturer	meterDataDetails		OFSCSOM_Manufacturer.dvm	OFSC_Manufacturer	SOM_Manufacturer
u_meter1_model			deviceModel	meterDataDetails		SOMOFSC_Model.dvm	OFSC_Model	SOM_Model
u_meter1_type	activities.definitions.getActivitySchema		meterConfigurationType	meterDataDetails		OFSCSOM_MeterConfigurationType.dvm	OFSC_MeterConfigurationType	SOM_MeterConfigurationType
u_meter1_loc	activities.definitions.getActivitySchema		meterLocation	meterDataDetails		OFSCSOM_MeterLocation.dvm	OFSC_MeterLocation	SOM_MeterLocation
status_found	activities.definitions.getActivitySchema		deviceStatusFound	meterDataDetails				
status_left	activities.definitions.getActivitySchema		deviceStatusLeft	meterDataDetails		OFSCSOM_MeterStatus.dvm	OFSC_MeterStatus	SOM_MeterStatus

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
	activities.definitions.getActivitySchema		stockLocation		meterCompletionDetails			
			readingCompletionDetails		meterCompletionDetails			
endTime	activities.definitions.getActivitySchema		readingDateTime					
			readingDetails		meterCompletionDetails			
			readingDetailsList		readingCompletionDetails			
u_meter1_read_seq	activities.definitions.getActivitySchema		readSequence					
u_meter1_uom	activities.definitions.getActivitySchema		unitOfMeasure		readingDetails	OFSCSOM_UOM.dvm	OFSC_UOM	SOM_UOM
u_meter1_TOU1			timeOfUse		readingDetailsList	SOMOFSC_TimeOfUsage	OFSC_TOU	SOM_TOU
u_meter1_sqi			sqi		readingDetailsList			
u_meter1_dials	activities.definitions.getActivitySchema		numberOfDials		readingDetailsList			
u_meter1_decimals	activities.definitions.getActivitySchema		numberOfDecimals					
u_meter1_upper_limit	activities.definitions.getActivitySchema		upperLimit		readingDetailsList			

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
u_meter1_lower_limit	activities.definitions.getActivitySchema		lowerLimit	readingDetailsList				
u_meter1_current_index			reading	readingDetailsList				
u_meter1_override_reading			overrideReading	readingDetailsList				
			modifyButtonClicked	readingDetailsList				
			itemCompletionDetails	readingDetailsList				
			verificationDetails					
			verificationOverride					
			response	itemCompletionDetails				
			verificationStatus	itemCompletionDetails				
			meterConfigurationType	itemCompletionDetails				
			errorCode					
			errorText					
			readingDetails					
			readingDetailsList		List			
			readSequence	readingDetailsList				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			unitOfMeasure	readingDetailsList				
			timeOfUse	readingDetailsList				
			numberOfDials	readingDetailsList				
			numberOfDecimals	readingDetailsList				
			upperLimit	readingDetailsList				
			lowerLimit	readingDetailsList				
			reading	readingDetailsList				
			overrideReading	readingDetailsList				
			itemDataDetails	itemDataDetails				
u_item_nbr			badgeNumber	itemDataDetails				
u_item_manufacturer			deviceManufacturer	itemDataDetails		SOMOFSC_Manufacturer	OFSC_Manufacturer	SOM_Manufacturer
u_item_id			deviceId	itemDataDetails				
u_item_model			deviceModel	itemDataDetails		SOMOFSC_Model	OFSC_Model	SOM_Model
Status_Found			deviceStatusFound	itemDataDetails				
Status_Left			deviceStatusLeft	itemDataDetails		OFSCSOM_Meter Status		
			stockLocation	itemDataDetails				
			modifyButtonClicked	itemDataDetails				
			newDevice					

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			meterCompletionDetails	newDevice				
			verificationDetails	newDevice				
			verificationOverride					
			response					
			verificationStatus	response				
			meterConfigurationType	response				
			errorCode	response				
			errorText	response				
			readingDetails	response				
			readingDetailsList		List			
			readSequence	readingDetailsList				
			unitOfMeasure	readingDetailsList				
			timeOfUse	readingDetailsList				
			numberOfDials	readingDetailsList				
			numberOfDecimals	readingDetailsList				
			upperLimit	readingDetailsList				
			lowerLimit	readingDetailsList				
			overrideReading	readingDetailsList				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			meterDataDetails					
u_meter2_number	activities.definitions.getActivitySchema		badgeNumber	meterDataDetails				
u_newmeter_manufacturer	activities.definitions.getActivitySchema		deviceManufacturer	meterDataDetails		OFSCSOM_Manufacturer.dvm	OFSC_Manufacturer	SOM_Manufacturer
u_meter2_Phase	activities.definitions.getActivitySchema		deviceId	meterDataDetails				
u_newmeter_model	activities.definitions.getActivitySchema		deviceModel	meterDataDetails		SOMOFSC_Model.dvm	OFSC_Model	SOM_Model
u_new_meter_type	activities.definitions.getActivitySchema		meterConfigurationType	meterDataDetails		OFSCSOM_MeterConfigurationType.dvm	OFSC_MeterConfigurationType	SOM_MeterConfigurationType
u_newmeter_location	activities.definitions.getActivitySchema		meterLocation	meterDataDetails		OFSCSOM_MeterLocation.dvm	OFSC_MeterLocation	SOM_MeterLocation
			deviceStatusFound					
newMtr_status_left			deviceStatusLeft					
			stockLocation					
	activities.definitions.getActivitySchema		readingCompletionDetails	meterCompletionDetails				
endTime			readingDateTime					
			readingDetails					
			readingDetailsList	readingDetails	List			

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
u_meter1_read_seq	activities.definitions.getActivitySchema		readSequence	readingDetailsList				
u_meter1_uom	activities.definitions.getActivitySchema		unitOfMeasure	readingDetailsList		SOMOFSC_UOM.dvm	OFSC_UOM	SOM_UOM
u_meter1_TOU1			timeOfUse	readingDetailsList		SOMOFSC_TimeOfUsage	OFSC_TOU	SOM_TOU
u_meter1_dials			numberOfDials	readingDetailsList				
u_meter1_decimals			numberOfDecimals	readingDetailsList				
u_meter1_upper_limit			upperLimit	readingDetailsList				
u_meter1_lower_limit			lowerLimit	readingDetailsList				
u_meter1_current_index	activities.definitions.getActivitySchema		reading	readingDetailsList				
u_meter1_override_reading			overrideReading	readingDetailsList				
			modifyButtonClicked	readingDetailsList				
			itemCompletionDetails					
			verificationDetails					
			verificationOverride	verificationDetails				
			response	verificationDetails				
			verificationStatus	response				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			meterConfigurationType	response				
			errorCode	response				
			errorText	response				
			readingDetails	response				
			readingDetailsList	readingDetails				
			readSequence	readingDetailsList				
			unitOfMeasure	readingDetailsList				
			timeOfUse	readingDetailsList				
			numberOfDials	readingDetailsList				
			numberOfDecimals	readingDetailsList				
			upperLimit	readingDetailsList				
			lowerLimit	readingDetailsList				
			reading	readingDetailsList				
			overrideReading	readingDetailsList				
			itemDataDetails	itemCompletionDetails				
u_new_item_nbr	activities.definitions.getActivitySchema		badgeNumber	itemDataDetails				
u_newitem_manufacturer	activities.definitions.getActivitySchema		deviceManufacturer	itemDataDetails		SOMOFSC_Manufacturer	OFSC_Manufacturer	SOM_Manufacturer

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
u_new_item_id	activities.definitions.getActivitySchema		deviceId	itemDataDetails				
u_newitem_model	activities.definitions.getActivitySchema		deviceModel	itemDataDetails		SOMOFSC_Model.dvm	OFSC_Model	SOM_Model
			deviceStatusFound					
newMtr_status_left			deviceStatusLeft	itemCompletionDetails				
			stockLocation	itemCompletionDetails				
			modifyButtonClicked					
			statusReasonUsage					
			statusReason	statusReasonUsage				
			statusReasonDescription	statusReasonUsage				
			fault					
			faultCode	fault				
			faultString	fault				
			faultActor	fault				
			detail	fault				
			customElements					
			dateTimeTagFormat					

Activity Status

This section describes data mapping for the following:

- [Request Mapping for Find Activity](#)
- [Response Mapping Find Activity Result](#)
- [Request Mapping for Get Activity](#)
- [Response Mapping for Oracle Utilities Customer To Meter](#)

Request Mapping for Find Activity

Request Mapping for Find Activity details for each integration point are as shown in the table below:

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message(Bulk Update)			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
sendDetails	sendDetails		customActionActivityBulkUpdateSchema	BulkUpdateSchema				
hostExternalId	sendDetails		apptNumber	bulkUpdateActivityItemSchema				
			identifyActivityBy	updateParameters		"apptNumber"		
			ifInFinalStatusThen	updateParameters		"Do nothing"		

Response Mapping Find Activity Result

Response Mapping for Find Activity Result details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message (Bulk Update)			Oracle Utilities Service Order Management Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
			responseDetails	responseDetails				
			statusDetails	responseDetails				
			statusForHostDesc	statusDetails		"Not scheduled"		

Request Mapping for Get Activity

The Request Mapping for Get Activity details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message (Bulk Update Post Response)			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
bulkUpdate_POSTResponse	bulkUpdate_POSTResponse							
activities.definitions.customActionActivityBulkUpdateSchemaResponse	bulkUpdate_POSTResponse							
results	activities.definitions.customActionActivityBulkUpdateSchemaResponse							
activityKeys	results		TemplateParameters	canonical_GET				

Oracle Field Service Cloud Request Message (Bulk Update Post Response)			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
activityId	activityKeys		activityId	TemplateParameters				

Response Mapping for Oracle Utilities Customer To Meter

The Response Mapping for Oracle Utilities Customer To Meter details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
canonical_GETResponse	canonical_GETResponse		responseDetails	responseDetails				
activities.definitions.getActivitySchema	canonical_GETResponse		statusDetails	responseDetails				
status	activities.definitions.getActivitySchema		statusForHostDesc	statusDetails		SOMOFSC_ InterimStatus	SOM_ InterimStatus	OFSC_ InterimStatus
startTime	activities.definitions.getActivitySchema		statusForHostDesc	statusDetails				

Appointment Request

This section describes data mapping for the following:

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

Appointment Request Mapping

Appointment Request mapping details for each integration point are as shown in the table below:

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message (Activity Booking Options)			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
sendDetail	sendDetail		QueryParameters					
startDateTime	sendDetail		dates	QueryParameters				
endDateTime	sendDetail		dates	QueryParameters				
criteria	sendDetail							
appointmentBookingGroup	sendDetail							
maxAppointmentWindowCount	sendDetail							
maxCostUnits	sendDetail							
timeZone	sendDetail							
taskType	sendDetail		activityType	QueryParameters		SOMOFSC_ActivityType.dvm	SOM_ActivityType	OFSC_ActivityType
serviceArea	sendDetail							
geocodeLatitude	sendDetail							
geocodeLongitude	sendDetail							
duration	sendDetail							

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message (Activity Booking Options)			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
address1	sendDetail							
address2	sendDetail							
address3	sendDetail							
address4	sendDetail							
crossStreet	sendDetail							
city	sendDetail							
stateProvince	sendDetail							
suburb	sendDetail							
postal	sendDetail		postalCode	QueryParameters				
country	sendDetail							
matchQuality	sendDetail							
siteDelay	sendDetail							
hostExternalId	sendDetail							

Appointment Response Mapping

The Appointment response mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
activityBookingOptions			responseDetail					

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
dates	activityBookingOptions	List						
areas	dates	List						
timeslots	areas	List	appointmentBookingsList	responseDetail				
label	timeslots		shiftId	appointmentBookingsList				
date	dates		arrivalDateTime	appointmentBookingsList		OFSCSOM_Appt_Timeslots	SOM_TimeSlots	OFSC_TimeSlots
date	dates		completionDateTime	appointmentBookingsList		OFSCSOM_Appt_Timeslots	SOM_TimeSlots	OFSC_TimeSlots
			rank	appointmentBookingsList				
reason	timeslots		units	appointmentBookingsList				
remainingQuota	timeslots		units	appointmentBookingsList				
date	dates		appointmentWindowDateTime	appointmentBookingsList		OFSCSOM_Appt_Timeslots	SOM_TimeSlots	OFSC_TimeSlots
date	dates		appointmentWindowDuration	appointmentBookingsList		OFSCSOM_Appt_Timeslots	OFSC_TimeSlots	Duration_InSeconds
			action	appointmentBookingsList				

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management - Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			messageText	responseDetail				
			messageCategory	responseDetail				
			messageNumber	responseDetail				
			messageParameters	responseDetail				

Device Verification

This section describes data mapping for the following:

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

Device Verification Request Mapping

Device Verification mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Request Message			Oracle Utilities Service Order Management Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
QueryParameters			D1-DeviceVerificationService					
u_meter1_number	QueryParameters		badgeNumber	requestMessage				
u_service_pt_id	QueryParameters		servicePointId	requestMessage				
			deviceVerificationType	requestMessage		OFSCSOM_DeviceVerificationType.dvm	SOM_DeviceType	OFSC_DeviceType

Device Verification Response Mapping

The Device Verification response mapping details for each integration point are as shown in the table below:

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
D1-DeviceVerification Service			response-wrapper					
responseMessage	D1-DeviceVerification Service							
verificationStatus								
meterConfigurationType			u_meter1_type					
errorCode								
errorText								
meterConfigurationType			u_new_item_type					
responseMessage/ readingDetails/ readingDetailsList/ readSequence			u_meter1_read_seq					
responseMessage/ readingDetails/ readingDetailsList/ unitOfMeasure			u_meter1_uom					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/ numberOfDials			u_meter1_dials					
responseMessage/ readingDetails/ readingDetailsList/ lowerLimit			u_meter1_lower_limit					
responseMessage/ readingDetails/ readingDetailsList/ upperLimit			u_meter1_upper_limit					
responseMessage/ readingDetails/ readingDetailsList/ timeOfUse			u_meter1_TOU1					
responseMessage/ readingDetails/ readingDetailsList/sqi			u_meter1_sqi					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDecimals			u_meter1_numberof Decimals					
responseMessage/ readingDetails/ readingDetailsList/ readSequence			u_meter1_read_seq2					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/ unitOfMeasure			u_meter1_uom2					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDials			u_meter1_dials2					
responseMessage/ readingDetails/ readingDetailsList/ lowerLimit			u_meter1_lower_limit 2					
responseMessage/ readingDetails/ readingDetailsList/ upperLimit			u_meter1_upper_limi t2					
responseMessage/ readingDetails/ readingDetailsList/ timeOfUse			u_meter1_TOU2					
responseMessage/ readingDetails/ readingDetailsList/sqi			u_meter1_sqi2					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDecimals			u_meter1_numberof Decimals2					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/ readSequence			u_meter1_read_seq3					
responseMessage/ readingDetails/ readingDetailsList/ unitOfMeasure			u_meter1_uom3					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDials			u_meter1_dials3					
responseMessage/ readingDetails/ readingDetailsList/ lowerLimit			u_meter1_lower_limit 3					
responseMessage/ readingDetails/ readingDetailsList/ upperLimit			u_meter1_upper_limi t3					
responseMessage/ readingDetails/ readingDetailsList/ timeOfUse			u_meter1_TOU3					
responseMessage/ readingDetails/ readingDetailsList/sqi			u_meter1_sqi3					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/ numberOfDecimals			u_meter1_numberof Decimals3					
responseMessage/ readingDetails/ readingDetailsList/ readSequence			u_meter1_read_seq4					
responseMessage/ readingDetails/ readingDetailsList/ unitOfMeasure			u_meter1_uom4					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDials			u_meter1_dials4					
responseMessage/ readingDetails/ readingDetailsList/ lowerLimit			u_meter1_lower_limit 4					
responseMessage/ readingDetails/ readingDetailsList/ upperLimit			u_meter1_upper_limi t4					
responseMessage/ readingDetails/ readingDetailsList/ timeOfUse			u_meter1_TOU4					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/sqi			u_meter1_sqi4					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDecimals			u_meter1_numberof Decimals4					
responseMessage/ readingDetails/ readingDetailsList/ readSequence			u_meter1_read_seq5					
responseMessage/ readingDetails/ readingDetailsList/ unitOfMeasure			u_meter1_uom5					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDials			u_meter1_dials5					
responseMessage/ readingDetails/ readingDetailsList/ lowerLimit			u_meter1_lower_limit 5					
responseMessage/ readingDetails/ readingDetailsList/ upperLimit			u_meter1_upper_limi t5					

Oracle Utilities Service Order Management Response Message			Oracle Field Service Cloud Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
responseMessage/ readingDetails/ readingDetailsList/ timeOfUse			u_meter1_TOU5					
responseMessage/ readingDetails/ readingDetailsList/sqi			u_meter1_sqi5					
responseMessage/ readingDetails/ readingDetailsList/ numberOfDecimals			u_meter1_numberof Decimals5					

Pickup Orders Create

This section describes data mapping for the following:

- [Pickup Orders Create Request Mapping](#)

Pickup Orders Create Request Mapping

Pickup Orders Create request mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Activity Created Event Message			Oracle Utilities Service Order Management Inbound Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
notify_POST		OutermostTag	D1-FARRequestSynchronous		OutermostTag			
			request		Group			
events.definitions.activityEvent	notify_POST	Group						
applicationId	events.definitions.activityEvent	string						
time	events.definitions.activityEvent	string						
eventType	events.definitions.activityEvent	string						
activityDetails	events.definitions.activityEvent	Group						
resourceId	activityDetails	string						
date	activityDetails	string						
apptNumber	activityDetails	string						
customerNumber	activityDetails	string						
activityChanges	events.definitions.activityEvent	Group						

Oracle Field Service Cloud Activity Created Event Message			Oracle Utilities Service Order Management Inbound Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			sourceSystem	request	string			
			externalActTypeIdentifier	request	string			
			fieldTaskType	request	string			
activityType	activityChanges	string	taskType	request	string	OFSCSOM_ActivityType.dvm	OFSCActivityType	SOMTaskType
XA_SITE_ID	activityChanges	string	spId	request	string			
			somStatus	request	string			
activityId	activityDetails	integer	relatedActivityId	request	string			
			externalReferenceId	request	string			
			externalSPTType	request	string			
			custDvcCompatibilityOverride	request	string			
			externalActivityElement	request	List			
activityId	activityDetails	integer	requesterTransactionId	externalActivityElement	string			
			faType	externalActivityElement	string			
			faStatus	externalActivityElement	string			
			servicePointExternalId	externalActivityElement	string			
startTime	activityChanges	string	startDateTime	externalActivityElement	string			
user	events.definitions.activityEvent	string	requesterUserId	externalActivityElement	string			
ACTIVITY_NOTES	activityChanges	string	comments	externalActivityElement	string			
			instructions	externalActivityElement	string			
			customElements	externalActivityElement	anytype			
			addressConstituents	request	group			

Oracle Field Service Cloud Activity Created Event Message			Oracle Utilities Service Order Management Inbound Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
country_code	activityChanges	string	country	addressConstituents	string	OFSCSOM_Country_code.dvm	OFSC_Country	SOM_Country
postalCode	activityChanges	string	postal	addressConstituents	string			
streetAddress	activityChanges	string	address1	addressConstituents	string			
			address2	addressConstituents	string			
			address3	addressConstituents	string			
			address4	addressConstituents	string			
city	activityChanges	string	city	addressConstituents	string			
			number1	addressConstituents	string			
			number2	addressConstituents	string			
			county	addressConstituents	string			
			houseType	addressConstituents	string			
			geographic	addressConstituents	string			
			inCityLimit	addressConstituents	string			
stateProvince	activityChanges	string	state	addressConstituents	string			
latitude	activityChanges	double	geocodeLatitude	addressConstituents	string			
longitude	activityChanges	double	geocodeLongitude	addressConstituents	string			
			saList	request	list			
			eventType	saList	string			
			saId	saList	string			
			contactDetails	request	group			
			customerInformation	contactDetails	group			
customerName	activityChanges	string	customerName	customerInformation	string			
			contactName	customerInformation	string			

Oracle Field Service Cloud Activity Created Event Message			Oracle Utilities Service Order Management Inbound Field Activity Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
customerPhone	activityChanges	string	mainPhone	customerInformation	string			
customerCell	activityChanges	string	cellPhone	customerInformation	string			
			accountId	customerInformation	string			
			personId	customerInformation	string			
			isAppointmentNecessary	customerInformation	string	SOMOFSC_ConfigProps.dvm	PropertyName	PropertyValue
			cancelReasonCode	customerInformation	string			
			cancelReasonDesc	customerInformation	string			

Process Activity

This section describes data mapping for the following:

- [Process Activity Request Mapping](#)
- [Process Activity Response Mapping](#)
- [Cancel Activity Request Mapping](#)

Process Activity Request Mapping

Process Activity request mapping details for each integration point are as shown in the table below:

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
sendDetail	D1-FieldActivityOBComm	OutermostTag	bulkUpdate_POST		OutermostTag			
			activities.definitions.customActionActivityBulkUpdateSchema	bulkUpdate_POST	Group			
			updateParameters	activities.definitions.customActionActivityBulkUpdateSchema	Group			
			activities	activities.definitions.customActionActivityBulkUpdateSchema	List			
			identifyActivityBy	updateParameters	string			
			ifInFinalStatusThen	updateParameters	string			
			ifExistsThenDoNotUpdateFields	updateParameters	string			
			resourceId	activities	string			
			accessSchedule	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
startDateTime	D1-FieldActivityOBComm/sendDetail/activities/activity/timeWindows/timeWindowsList		resourceInternalId	activities	integer			
hostExternalId	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	date	activities	string			
taskType	D1-FieldActivityOBComm/sendDetail/activities/activity		apptNumber	activities	string			
estimatedDuration	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	activityType	activities	string	SOMOFSC_ActivityType.dvm	SOM_ActivityType	OFSC_ActivityType
			duration	activities	integer			
			timeDeliveredStart	activities	string			
queue	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	timeDeliveredEnd	activities	string			
customerName	D1-FieldActivityOBComm/sendDetail/activities/customerInformation	Field	timeSlot	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
accountId	D1-FieldActivityOBComm/sendDetail/activities/activity/customerInformation	Field	customerName	activities	string			
mainPhone	D1-FieldActivityOBComm/sendDetail/activities/activity/customerInformation	Field	customerNumber	activities	string			
			customerPhone	activities	string			
cellPhone	D1-FieldActivityOBComm/sendDetail/activities/activity/customerInformation	Field	customerEmail	activities	string			
address1	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	customerCell	activities	string			
address2	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	streetAddress					
address3	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	streetAddress					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
address4	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	streetAddress					
			streetAddress					
city	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	streetAddress	activities	string			
postal	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	city	activities	string			
state	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	postalCode	activities	string			
			stateProvince	activities	string			
			language	activities	string			
timeZone	D1-FieldActivityOBComm/sendDetail/activities/activity/location	Field	reminderTime	activities	integer			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
geocodeLongitude	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	timeZone	activities	string			
geocodeLatitude	D1-FieldActivityOBComm/sendDetail/activities/activity/location/siteAddress	Field	longitude	activities	double			
			latitude	activities	double			
country	D1-FieldActivityOBComm/sendDetail/activities/activity/location/serviceAddress	Field	country_code	activities	string	SOMOFSC_Country_code.dvm		
deviceId	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_serial	activities	string			
badgeNumber	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_number	activities	string			
meterLocation	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_location	activities	string	SOMOFSC_MeterLocation.dvm		

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
meterConfigurationType	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_type	activities	string	SOMOFSC_MeterConfigurationType.dvm		
unitOfMeasure	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	Unit_of_Measure	activities	string	SOMOFSC_UnitOfMeasure.dvm		
payoffAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails	Field	payOffAmount	activities	string			
currentAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails	Field	currentAmount	activities	string			
lessThanThirtyDaysAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails/arrearsDataDetails	Field	lessThan30	activities	string			
thirtyDaysAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails/arrearsDataDetails	Field	thirtyDaysAmount	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
overSixtyDaysAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails/arrearsDataDetails	Field	over60DaysAmt	activities	string			
criteria	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	u_service_pt_type	activities	string			
servicePointId	D1-FieldActivityOBComm/sendDetail/activities/activity/servicePointDataDetails	Field	u_service_pt_id	activities	string			
newCharges	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails/arrearsDataDetails	Field	u_new_charges	activities	string			
badgeNumber	D1-FieldActivityOBComm/sendDetail/activities/activity/itemDataDetails	Field	u_item_nbr	activities	string			
deviceId	D1-FieldActivityOBComm/sendDetail/activities/activity/itemDataDetails	Field	u_item_id	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
deviceManufacturer	D1-FieldActivityOBComm/sendDetail/activities/activity/itemDataDetails	Field	u_item_manufacturer	activities	string			
deviceModel	D1-FieldActivityOBComm/sendDetail/activities/activity/itemDataDetails	Field	u_item_model	activities	string			
disputedAmount	D1-FieldActivityOBComm/sendDetail/activities/activity/collectionDataDetails/arrearsDataDetails	Field	disputedAmount	activities	string			
activityComments	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	u_activity_comments	activities	string			
siteInstructions	D1-FieldActivityOBComm/sendDetail/activities/activity/location	Field	u_site_instructions	activities	string			
serviceWarnings	D1-FieldActivityOBComm/sendDetail/activities/activity/servicePointDataDetails	Field	u_service_warnings	activities	string	SOMOFSC_ServiceWarnings.dvm		
premiseId	D1-FieldActivityOBComm/sendDetail/activities/activity/servicePointDataDetails	Field	u_premise_id	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
serviceInstructions	D1-FieldActivityOBComm/sendDetail/activities/activity/servicePointDataDetails	Field	u_service_instructions	activities	string	SOMOFSC_ServiceInstructions.dvm		
deviceManufacturer	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_mfg_C	activities	string	SOMOFSC_Manufacturer.dvm		
meterLocation	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_loc_C	activities	string			
deviceModel	D1-FieldActivityOBComm/sendDetail/activities/activity/meterDataDetails	Field	u_meter1_model_C	activities	string	SOMOFSC_Model.dvm		
numberOfDecimals	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_decimals	activities	integer			
upperLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_upper_limit	activities	string			

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
lowerLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_lower_limit	activities	string			
unitOfMeasure	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_uom	activities	string			
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_read_seq	activities	integer			
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_read_seq2					
unitOfMeasure	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_uom2					
numberOfDials	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_dials2					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
lowerLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_lower_limit2					
upperLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_upper_limit2					
reading	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_current_index2					
timeOfUse	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_TOU2					
numberOfDecimals	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_numberofDecimals 2					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_read_seq3					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
unitOfMeasure	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_uom3					
numberOfDials	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_dials3					
lowerLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_lower_limit3					
upperLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_upper_limit3					
reading	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_current_index3					
timeOfUse	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_TOU3					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
numberOfDecimals	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_numberofDecimals3					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_read_seq4					
unitOfMeasure	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_uom4					
numberOfDials	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_dials4					
lowerLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_lower_limit4					
upperLimit	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_upper_limit4					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
reading	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_current_index4					
timeOfUse	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_TOU4					
numberOfDecimals	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_numberofDecimals4					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_read_seq5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_uom5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_dials5					

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_lower_limit5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_upper_limit5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_current_index5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_TOU5					
readSequence	D1-FieldActivityOBComm/sendDetail/activities/activity/readingDetails/readingDetailsList	Field	u_existing_numberofDecimals5					

Process Activity Response Mapping

Process Activity response mapping details for each integration point are as shown in the table below:

Oracle Field Service Cloud Process Activity Response Message			Oracle Utilities Service Order Management Activity Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
bulkUpdate_ POSTResponse		Outerm ostTag	responseDetail		Outerm ostTag			
			dispatcherNotified	responseDetail				
			failedCancellation	responseDetail	Group			
			tasks	responseDetail/ failedCancellation	List			
activityId	activityKeys	String	taskId	responseDetail/ failedCancellation/tasks	Field			
			messageId	responseDetail	Field			
			messageStatus	responseDetail	Field			
operationsPerformed	results	String	messageText	responseDetail	Field			
			messageData	responseDetail	Group			
			messageCategory	responseDetail/ messageData	Field			
			messageNumber	responseDetail/ messageData	Field			
			messageParameters	responseDetail/ messageData	Group			
			parameters	responseDetail/ messageData/ messageParameters	List			
			parameterType	responseDetail/ messageData/ messageParameters/ parameters	Field			

Oracle Field Service Cloud Process Activity Response Message			Oracle Utilities Service Order Management Activity Response Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Field Service Cloud Column	Oracle Utilities Service Order Management Column
			parameterValue	responseDetail/ messageData/ messageParameters/ parameters	Field			
			fault	responseDetail				
operationsFailed	results	String	faultCode	responseDetail/fault				
errorDetail	errors	String	faultString	responseDetail/fault				
			faultActor	responseDetail/fault				
			detail	responseDetail/fault	RAW			
activities.definitions.cust omActionActivityBulk UpdateSchemaResponse	bulkUpdate_ POSTResponse	Group						
results	activities.definitions.cust omActionActivityBulk UpdateSchemaResponse	List						
errors	results	List						
activityKeys	results	Group						
operation	errors	String						
apptNumber	activityKeys	String						
customerNumber	activityKeys	String						

Cancel Activity Request Mapping

Cancel Activity Request mapping details for each integration point are as shown in the table below:

Oracle Utilities Service Order Management Request Message			Oracle Field Service Cloud Request Message			DVM Mapping		
Element Name	Parent Element	Type	Element Name	Parent Element	Type	DVM	Oracle Utilities Service Order Management Column	Oracle Field Service Cloud Column
sendDetail	D1-FieldActivityOBComm	Outerm ostTag	bulkUpdate_POST		Outerm ostTag			
hostExternalId	D1-FieldActivityOBComm/sendDetail/activities/activity	Field	apptNumber	activities	string			