

PUBLIC SAP Service and Asset Manager Document Version: 2310 – 2024-03-20

SAP Service and Asset Manager Configuration Guide

THE BEST RUN

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Document History

Before you begin reading this guide, be sure that you have the latest version. Find the latest version at https:// help.sap.com/docs/SAP_SERVICE_ASSET_MANAGER.

The following table provides an overview of the most important document changes.

Document Version	Date	Description of Changes				
1.0	NOV 2023	Original release of the SAP Service and Asset Manager Configuration guide, version 2310				

1 SAP Service and Asset Manager Overview

(i) Note

This guide only covers setting up and enabling the SAP Service and Asset Manager application on a Windows platform.

The SAP Service and Asset Manager Configuration Guide is intended for system administrators, technical architects, implementation team members, and IT personnel involved in the installation, setup, and configuration of software for the application.

It is assumed that the personnel performing the installation and setup are familiar with SAP installation guidelines. SAP setup knowledge is helpful while carrying out the steps for the setup of SAP.

Use the SAP Service and Asset Manager Configuration Guide along with appropriate SAP documentation.

Functions Supported by SAP Service and Asset Manager

SAP Service and Asset Manager is a mobile solution for managing work orders, notifications, condition monitoring, and material consumption. The application also performs time management and failure analysis.

Regardless of connectivity, SAP Service and Asset Manager allows remote employees to access, complete, and manage their assigned work orders and notifications through their devices. With SAP Service and Asset Manager, they have SAP back end data readily available including task lists, repair histories, reference documents, and geospatial data such as addresses and maps. Armed with more information, employees work smarter, have more work time, improve their first-time fix rates, and extend asset lives by conducting more preventative maintenance.

SAP Service and Asset Manager comes packaged with a mobile add-on for SAP ERP and a mobile add-on for SAP S/4HANA. They offer tight integration and easier deployment without interference to or from your existing SAP system customizations or standard SAP objects. They provide you with full configuration, administration, and monitoring features that allow you to manage the SAP Service and Asset Manager application from within your SAP system infrastructure.

1.1 Supported Back-End Systems

SAP Service and Asset Manager supports the following back-end systems:

- SAP S/4HANA Cloud Private edition
- SAP S/4HANA 1610 FPS 03 or higher

O Note

For SAP S/4HANA on-premise 1909 systems, no ABAP add-on installation is required. Check 2493602, including the prerequisites section. For the SAP S/4HANA on-premise 1909 release, SAP Service and Asset Manager 1911 is only available in SAP S/4HANA 1909 FPS01 and above releases.

- SAP Enhancement Package 7 for SAP ERP 6.0 Support Package 14 or higher
- SAP Enhancement Package 8 for SAP ERP 6.0 Support Package SP07 or higher

(i) Note

With the SAP S/4HANA Cloud Public edition back-end system, you must use SAP Maintenace Assistant.

The same functions are available for both back-end systems.

For detailed information, see the following guides:

- Mobile Add-On for ERP Installation Guide
- Mobile Add-On for S/4HANA Installation Guide

1.2 SAP Service and Asset Manager Functional Overview

SAP Service and Asset Manager is a mobile solution for managing work orders, notifications, condition monitoring, and material consumption. The application also performs time management and failure analysis.

Regardless of connectivity, SAP Service and Asset Manager allows remote employees to access, complete, and manage their assigned work orders and notifications through their mobile devices. With SAP Service and Asset Manager, they have SAP back end data readily available including task lists, repair histories, reference documents, and geospatial data such as addresses and maps. Armed with more information, employees work smarter, have more work time, improve their first-time fix rates, and extend asset lives by conducting more preventative maintenance.

SAP Service and Asset Manager comes packaged with a mobile add-on for SAP ERP and a mobile add-on for SAP S/4HANA. They offer tight integration and easier deployment without interference to or from your existing SAP system customizations or standard SAP objects. They provide you with full configuration, administration, and monitoring features that allow you to manage the SAP Service and Asset Manager application from within your SAP system infrastructure.

The main features and functions available in SAP Service and Asset Manager include the following.

Work Orders and Notifications

SAP Service and Asset Manager supports the following standard SAP Plant Maintenance Work order functionalities on the mobile device:

- Download Work order assignments based on various assignment models
- Display work orders and their details, including repair histories

- Edit work orders and their details
- Create work orders and their details
- Complete work orders and update their status

The following standard SAP notification functionalities are supported on the mobile device:

- Download notification assignments based on various assignment models
- Display notifications and their details
- Edit notifications and their details
- Create notifications and their details
- Complete notifications and update their status

Maintenance Execution Data Capture

The following data related to maintenance execution can be captured from the mobile device:

- Maintenance order confirmation, goods issue for work orders
- Measurement readings for work orders
- Damage codes for notifications

Time Management

Maintenance technicians can use SAP Service and Asset Manager to trace their time efficiently and accurately by entering the timesheet and the attendance records from the mobile device.

Single Sign-On (SSO)

Single Sign-On (SSO) allows the user to log into the SAP Service and Asset Manager application from the client using SSO credentials without having to enter their back end user name and password. In addition, once logged in with SSO, you can access another mobile application without the need to log in again.

Documents

SAP Service and Asset Manager supports viewing of leading data or transaction data attachments on the mobile device. Documents include Microsoft Office files, PDFs, and other commonly used business documents, including videos, pictures, and audio files.

Downloading and uploading documents are supported for the following objects:

- Work orders
- Notifications

- Equipment
- Functional locations

The following standard SAP document storage options are supported:

- SAP Business Document Service (BDS)
- SAP Generic Object Service (GOS)
- SAP Document Management System (DMS)

Field Operations Worker Component

Inspection rounds with routing is an optional feature available as the SAP Service and Asset Manager Field Operations Worker (FOW) component. FOW supports:

- Route and stop definitions
- Technical object assignments
- Measuring point assignments
- Measurement readings

Route and stop definition is implemented via the standard work order inspection round functionality.

Crew Management Component

SAP Service and Asset Manager supports work crew management. This feature supports:

- Daily crew list definition
- Crew member and vehicle assignment
- Crew time management

Crew management is an optional feature available as the SAP Service and Asset Manager Crew Management component.

Meter Management Component

SAP Service and Asset Manager supports the industry solution for utilities meter management. The following standard features are supported:

- Meter installation (full or technical) via work order
- Meter replacement via work order
- Meter removal via work order
- Meter repair via work order

Customer Service Component

SAP Service and Asset Manager supports customer service. This feature supports:

- Details of service engagements of the technician with the customer
- Details of business partners for the customer
- Technicians have access to contract and warranty information for the customer
- Mapping functionality for both customer addresses and partner address, provided the mobile device has internet access

Asset Central Component

Asset Central links production systems and assets with manufacturing and maintenance business processes to reduce operational and maintenance costs and increase asset uptime. Using Asset Central, you can use PdMS, or Predictive Maintenance and Service equipment indicators that allow you to identify the health status of your equipment.

1.2.1 Supported SAP Transaction Codes for SAP Service and Asset Manager

SAP Service and Asset Manager uses the SAP back end and specific SAP ERP transaction codes to help configure the application.

Transaction Codes	Definition
IW21	Create notifications
IW22	Edit notifications
IW23	Display notifications
IW31	Create work orders
IW32	Edit work orders
IW33	Display work orders
IW51	Create service notification
IW52	Change service notification
IW53	Display service notification
CAT2	Record time entries

Transaction Codes	Definition
IE03	Display equipment BOM
IE13	Display functional location BOM
IL03	Display functional location
MM03	Display material
IK13	Display measurement document
IK12	Change measurement document
IK11	Create measurement document
IW41	Create PM confirmation
MIGO	Goods issue for work orders
CV01N	Create DMS document
CV03N	Display DMS document
OAOR	Manage BDS document

2 SAP Mobile Add-On for the SAP Configuration Panel

The SAP Mobile Add-On provides integration services for SAP Service and Asset Manager. A central configuration tool known as the SAP Configuration Panel is provided to perform all configuration tasks related for the mobile application. The Configuration Panel is a browser-based application based on Web Dynpro ABAP.

2.1 Accessing the SAP Mobile Add-On for SAP Configuration Panel

Context

You can access the Configuration Panel either through SAP Customizing or using a transaction code directly. First, log into your back-end system, and then you can choose from the following two options:

Procedure

- To access the ConfigPanel through Customizing, enter the transaction spro to open the Customizing: Execute Project screen. Select the SAP Reference IMG tab. Using the SAP Customizing Implementation Guide list, select Agentry SAP Framework Configuration System Settings Define Mobile Applications .
- 2. To access the ConfigPanel using a direct transaction code shortcut, enter /n/syclo/configpanel.

Results

The Mobile Application Integration Framework home page is displayed in a browser.

SAP	Mobile Application Integration Framework Configuration	
Welcome System - Today -		Log Of
Mobile Application Configuration		
Seneral Info Disclose Section Configuration Configuration about mobile applications, such as release, description. Component Assignments Configuration Confi	Obata Channel Integration Settings o Obata Service Assignment Assign standard obata Service to the mobile application. oData service model will be generated based on configuration setting. o - oData Model Configuration Mobile application oData Model definition for entity type, entity set, association, association set o - oData Model Data Object Configuration o - oData Model Data Object Configuration Data entraction and distribution logic and rules are defined for configuration, master and transaction distribution logic and rules are defined for configuration, master and	 Exchange Object Configuration Change detection rules for SAP data objects such as master data, transaction data can be
Transaction Management Setting – Inbound Transaction Queue Definition Define Inbound Transaction Queue Settings Data Staging Settings – Data Agent Definition Define data store subpring agent settings. – Dafine staging data storage, data agent assignment, schedule, map information etc.	RFC Channel Integration Settings	Push Framework Settings Push Scenario Definition Push Scenario can be defined to push data to mobile devices when qualified datasets changed in the backend. Outbound Trigger Configuration Triggers to interface with external systems are defined. © Subscription darent Definition Subscription Agent Definition Defines how subscription requests for backend system data are handled.
System Configuration System Settings a Technical Settings Framework technical settings such as logging level, conversion exit	Security Settings a Mobile Authorization Settings Mobile application specific security settings can be defined for integration framework, mobile application or cash Indifes.	

2.2 Panels, Tabs, and Field Descriptions

Perform configuration activities for your app through the ConfigPanel.

Customization changes you make via the ConfigPanel can significantly impact the behavior of your app. Always follow SAP best practices, make changes and test them in the development and quality control systems before you transport the changes into your production landscape.

2.2.1 Standard Operations in the Configuration Panel

While configuration for each mobile application is unique, certain toolbar functions in the Configuration Panel are common and are available for all applications.

Mobile Application Filter

If more than one mobile application is available in the same system, you can use the filter function to only view items for a specific application. Find the filter option on any page where multiple applications are displayed.

To filter by application, click the arrow to the right of the *Defined Mobile Applications* field, and select the appropriate mobile application. To remove the selection and view all items for all mobile applications in the system, click in the field again and select the asterisk (*) symbol.

Creating, Copying, Deleting, and Changing Items

The following standard actions are available to configure different components and items within your mobile application setup:

- Create: Creates a new item. All modifiable fields are empty.
- **Copy:** Copies the item that was highlighted and creates a new item. All modifiable fields are filled in with the information from the existing item and are available for changes before saving.
- **Delete:** Deletes the highlighted item.
- Change: Allows you to change the highlighted item in the modifiable fields.

Saving or Canceling Changes for an Item

Once you click the *Create*, *Copy*, or *Change* button, the *Save* and *Cancel* buttons are displayed. After you change the configuration of the item, click *Save* to save the changes or *Cancel* to discard the changes.

(i) Note

If the *Save* and *Cancel* buttons are active, the *Home* link for the ConfigPanel is not available. Either save your changes or cancel out of the changes to return to the main Configuration Panel page

Message List

Certain actions can generate system messages. These messages can be error messages or informational messages. If you perform an action that prompts a system message, a message bar appears above the main panel with a brief description of the message.

Click the Show List button to display the detailed view of the message list.

2.2.2 General Info Settings

The following areas are used in configuring general information for the application:

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2.2.2.1 Mobile Application Configuration

The Mobile Application Configuration page allows you to configure general settings for the entire mobile application.

The Mobile Application Configuration page contains the following tabs:

- General
- Mobile Status Setting
- Conversion Exit Setting (not used in SAP Service and Asset Manager)
- System Components (not used in SAP Service and Asset Manager)
- Parameters
- Client Globals (not used in SAP Service and Asset Manager)
- User Attributes (not used in SAP Service and Asset Manager) Application Persona
- Features

General Tab

Use the General tab to create or change basic information about a mobile application.

- **Basic Data section:** Enter the name of the mobile application in the <Mobile Application> field, which is limited to 40 characters. Select the type of application in the <Type> field. Note that for SAP Service and Asset Manager, the type is <oData Applications>. Enter a brief, easy to understand description in the <Description> field, limited to 60 characters. Type in the release number of the application in the <Release> field.
- User Management Setting: When the <Disable Automatic User Creation> box is checked, a new user GUID is not automatically created when a new mobile client is detected in the system. Manually create and maintain mobile users through the Administration portal.
- Server Management Setting: When the <Disable Automatic Server Registration> box is checked, a new server GUID is not automatically created when a new server is detected in the system. You must manually create and maintain servers through the Administration portal.
- Life-cycle management: When the <Application Blocked> box is checked, the mobile application is disabled. The mobile user can no longer connect to the back-end system for the mobile application, and the xChange process is also disabled. The <Effective Date> and <Time> fields flag when the change takes effect.
- **xChange Setting:** When the <Disable Change Detection> box is checked, the change detection process, or xchange process, for the application is completely disabled.
- Inbound Transaction Management: Not used in the SAP Service and Asset Manager application.
- **Multi Backend Setting:** When checked, enables a specific mobile application to connect to multiple SAP systems, consisting of one host server and one or more satellite servers.
- System Role: Dropdown menu where you can select either *Host* or *Satellite*. A *Host* system is the connection between SAP and the SAP Service and Asset Manager application in the SAP Business Technology Platform. The host server provides the logic to the application and functions as the bridge to the satellite server or servers. There can only be one host server per system.

Satellite servers communicate with SAP through the host server. To complete multi backend configuration, configure the host and back-end servers using the *System Components* tab. See that section for more details.

Mobile Status Setting Tab

Use the Mobile Status Setting tab to map the available mobile statuses that an oData mobile data object (OMDO) supports on the client side. If a user status also exists for the same object type, you can link it to the mobile status and the system status through this tab.

- **Mobile Application Info:** The <Mobile Application> field is read only and is the name of the mobile application. The <Mobile Application Description> is read only and is a brief description of the mobile application. The <Release> field is read only and is the release number of the application.
- Mobile Status Mapping: Use the <Add Status> and <Delete Status> buttons to create and delete mobile status mappings. Fill out the <Object Type> with the specific object in the mobile application, for example, <Notification>. The <Mobile Status> is the status defined by the mobile application. The <Label on Mobile> is not used. The <User Status> is an SAP status code as defined in SAP. Note that the status codes are language independent codes.

If the <Initial Status> checkbox is selected, the mobile status is displayed by default when you download the object to the mobile device. To skip a specific mobile status update from a mobile device, use the <Skip Update> checkbox corresponding to the mobile status object.

Use the Mobile Status Alias List table to define language-specific mobile status aliases.

In the following example screen, the highlighted row in the mapping table indicates that if a user sets a work order to completed, the application sets the work order system status to 10045 in SAP.

G	General Mobile Status Setting Conversion Exit Setting System Components Parameters Client Globals User Attributes									
Mobile Application Info Mobile Application: Mobile App. Desc.: Image: Im										
	Mobile Status List									
	Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status	Status Profile	User Status	Initial Status	Skip Update	. ^
	WORKORDER	R COMPLETED			10045					
	WORKORDER	R HOLD								
	WORKORDER	R RECEIVED			10630			\checkmark		
	WORKORDER	R STARTED			10002					
	WORKORDER	R TRANSFER							\checkmark	
	WO_OPERAT	TION COMPLETED								~
Mot	oile Status	Detail								
	Object Type:	WORKORDER						Mobile	Status Al	liae Liet
N	Nobile Status:	COMPLETED		Label On M	obile: COMPLE	TED		WODIC		
Stati	us Attribute 1:			Status Attribu	ute 2:			*Lai	nguage Alia	is.
S	ystem Status:	10045								
Status Profile:					User Status:					
Initial Status: Skip					idate:					

If there is no system status or user status, the mobile status only affects the mobile device and does not affect the backend SAP system.

If there is a user status specified but no status profile when the mobile user sets the mobile status, the app sets that user status for the object, disregarding the status profile of that object.

If there is a user status and status profile specified when the mobile user sets the mobile status, the app sets that user status if the object uses that status profile.

Parameters Tab

The Parameters tab defines system parameters.

General	Mobil	le Status Setting	Conversion Exit Setting	System Components	Parameters	Client Globals	User Attributes					
Mobile Application Info												
Mobile Appli		AP_ASSET_MANA		Release:								
Mobile App. Desc.: SAP Asset Manager												
Applicatio	Application Parameters											
Paramete	er List											
🛃 Add												
RecN	0	Parameter Gro	Param. Name		Param. V	alue	٦	Scope	Dep. RecNo	Active	No Change	Comment
00000	00003	BACKGROUNDC	ValidationView		fce9e9			Application	000000001	\checkmark	~	
00000	000004	BDSDOCUMENT	Asset		EQUI			Application	000000001	~	\checkmark	
00000	00005	BDSDOCUMENT	ClassType		BO			Application	000000001	\checkmark	~	
00000	000006	BDSDOCUMENT	FunctionalLocation		BUS0010			Application	000000001	\checkmark	\checkmark	
00000	000007	BDSDOCUMENT	Notification		BUS2038			Application	000000001	\checkmark	\checkmark	
00000	80000	BDSDOCUMENT	WorkOrder		BUS2007			Application	000000001	\checkmark	\checkmark	
00000	000009	CATALOGTYPE	CatTypeActivities		А			Application	0000000000	\checkmark	\checkmark	
00000	000010	CATALOGTYPE	CatTypeCauses		5			Application	0000000000	\checkmark	\checkmark	
00000	000011	CATALOGTYPE	CatTypeDefects	CatTypeDefects		С		Application	0000000000	\checkmark	\checkmark	
00000	000012	CATALOGTYPE	CatTypeObjectParts		В			Application	0000000000	\checkmark	1	
Para	imeter Deta	ail Language S	Specific Values									
		4										
Param	eter Dei											
	* Paramet		ICATION				_					
			dentifier						oplication ~			
		im. Value: LOCA	L				Use Language Spe					
	Rule Id:		22224				V Use Rule:	1				
							\sim					
Dependent Parameter Group: APPLICATION Dependent Parameter Name: LocalIdentifier												
	Dependent Parameter Value: LOCAL											
	Comment:		-									
	Ac	ctive Flag:										
1	Active Flag.											

- **Mobile Application Info:** The <Mobile Application> field is read only and is the name of the mobile application. The <Mobile Application Description> is read only and is a brief description of the mobile application. The <Release> field is read only and is the release number of the application.
- Application Parameters: Use the <Add> and <Delete> buttons to create and delete parameters.
- **Parameter Detail:** The <Parameter Group> is the group to which the parameter belongs. Groups are how you organize parameters. References to a parameter include both the group name and the parameter name. The <Parameter Name> is the unique name of the parameter.

The <Parameter Value> is the currently configured value of the parameter. References to the parameter return the configured value. Use the <Language Specific Value> checkbox to select which parameters you wish to be language dependent. The checkbox and the corresponding Language Specific Values tab are only active after you have clicked the Change button. Note that the language available in the

Language Specific Values tab, Value List table, depends on the language you are using to log into the mobile client. You must manually maintain each parameter that you wish to control for a language specific value separately.

Set the <Parameter Scope> to one of the following options:

- Mobile Application: Value for all users of the application
- Mobile User: Value you can override for individual users. To override a parameter value of a user, see the Administration & Monitoring Portal on parameters

(i) Note

For information on setting user parameters, see the following security guides, depending on your back end system:

- Mobile Add-On for S/4HANA Security Guide
- Mobile Add-On for ERP Security Guide

The <Rule ID> field contains the rule used at runtime. If you check the <Use Rule> box, the rule in the <Rule ID> field is active.

Check the <Active Flag> box to ensure that the parameter is used by the mobile application. Inactive parameters are not used by the application. When you check the <No Runtime Change> box, you cannot override the value of the parameter. The configured value is always the value. If the box is not checked, the parameter values can be overridden at runtime through synchronization processing.

Application Persona Tab

The persona selected determines the data that is downloaded to the mobile client.

Mobile Application Info

Read-only information about the application.

Application Personas

- Auto Determination Rule:
- Persona List: The following personas are standard in an SAP Service and Asset Manager installation:
 - MAINTENANCE_TECHNICIAN (default)
 - INVENTORY_CLERK

Features Tab

Switchable features allow you to configure various components into features. Feature assignment determines the data that is downloaded to the mobile client.

Mobile /	Mobile Application (Display Mode)									
Cr	Create Copy To Delete Change									
General Mobile Status Setting Conversion Exit Setting System Components Parameters Client Globals User Attributes Application Persona										
Mot	Mobile Application Info									
Mobi	le Application: SAP_ASSET_MANAGER_	Release								
Mobi	le App. Desc.: SAP Asset Manager									
Swi	tchable Features									
Fea	iture List									
	App. Feature Id	Active	Feature Desc.					^		
	CA_BILL_OF_MATERIAL	\checkmark	This feature enables BOI	VI data						
	CA_CLASSIFICATION	\checkmark	This feature enables clas	sification data						
	CA_CORE_DATA Image: CA_CORE_DATA Image: CA_CORE_DATA									
	CA_CREW_MANAGEMENT	\checkmark	This feature allows user t	o perform crew m	anagement activities	\$				
	CA_DIGITAL_SIGNATURE	\checkmark	This feature allows user t	o perform digital s	signature			~		

Mobile Application Info

Read-only information about the application.

Switchable Features

Check or uncheck a feature from the feature list to enable or disable it.

2.2.2.2 Component Assignments

The Component Assignments page allows you to configure persona and feature assignments.

Use the *Mobile Application Filter* field to select your application. Then, click the application hyperlink in the *Search Results* table.

SAP	M	Mobile Application Integration Framework Configuration					
Velcome							
ConfigPanel Home pplication Assignment Configuration	Mobile Application Filter: SAP Ass	et Manager	~				
arch Applications							
earch Parameters				_			
Nobile Application: Nobile App. Desc.:	Mobile App. Type: Standard Application	on 🗸 Release:					
Search							
earch Result	v			2			
	Mobile Application Type	Release	Mobile Application Description	2			

User Personas Tab

Use the *Apply Filters* section to filter for a specific persona or specific features. In the following example, we've filtered for all features that belong to the *MAINTENANCE_TECHNICIAN* persona.

The *Feature Assignment* section shows you the filtered results. Use the drop-down menu to further filter your selections. For example, we've chosen to display only active, or selected features for the maintenance technician persona.

Change 🖕 Application Search		
obile Application: SAP_ASSET_MANAGER_ Mobile App. Type: oData Application	Release: Mobile App. Desc.: SAP Asset Manager	
User Personas Switchable Features		
pply Filters		
User Persona: MAINTENANCE_TECHNI V	App. Feature Id:	
ature Assignment		
Show Only Selected		
User Persona	App. Feature Id	Active Flag
MAINTENANCE_TECHNICIAN	CA_GEOSPATIAL_INFO_SERVICE	
	CS_CUSTOMER_SERVICE	
	FOW_ROUTE	
	IAM_CHECKLIST	
	MM_MATERIAL_DATA	\checkmark
	MM_STOCK_LOOKUP	V
	MM_TECHNICIAN_GOODS_ISSUE	
	PM_CLOCK_IN_CLOCK_OUT	✓
	PM_CONFIRMATION	
	PM_LINEAR_ASSET_MANAGMENT	
	FM_LINEAR_ASSET_MANAGMENT	
	PM_LINEAR_ASSE1_MANAGMENT PM_MEASUREMENT	✓
	PM_MEASUREMENT	✓
	PM_MEASUREMENT PM_NOTIFICATION	

Switchable Features Tab

The *Switchable Features* tab allows you to configure OMDOs required for each feature. During initial and delta syncs, the mobile client only downloads data from the assigned OMDOs.

Use the Apply Filters section to filter for a specific OMDO or feature ID.

The Assignment List section shows you which OMDOs are assigned and active (or not active) with a feature.

(i) Note

Don't select OMDOs that belong to the online service (ex: /MERP/SAP_ONLINE_LOOKUP_EXT_<version>). These online service entities might not exist in the base service (/MERP/ SAP_ASSET_MANAGER_<version>).

ConfigPanel Home Mobile Application Filter: SAP Asset Manage	er 🗸 🗸	
plication Assignment Definitions		
Change 🖕 Application Search		
Mobile Application: SAP_ASSET_MANAGER_ Mobile App. Type: oData Application	Release: Mobile App. Desc.: SAP Asset Manager	
User Personas Switchable Features		
Apply Filters		
App. Feature Id: V oMDO Id:	✓ oMDO Process Flow:	~
Pattern Filter:		
Assignment List		
Show Only Selected V		
App. Feature Id	oMDO Id	Active Flag
CA_ATTACHMENT	SAM COA_ACTIVITY_TYPE	
	SAM2 DOCUMENT	v
	SAM2 _DOCUMENT SAM2 _FILE_EXTENSIONS	 ✓ ✓
CA_BILL_OF_MATERIAL		
CA_BILL_OF_MATERIAL	SAM2FILE_EXTENSIONS	 Image: A start of the start of
CA_BILL_OF_MATERIAL	SAM:FILE_EXTENSIONS SAM:BOM_GENERIC	V V
CA_BILL_OF_MATERIAL	SAM: _FILE_EXTENSIONS SAM: _BOM_GENERIC SAM: _LEOUIPMENT_BOM	 ✓ ✓ ✓
CA_BILL_OF_MATERIAL	SAMC _FILE_EXTENSIONS SAMC _BOM_GENERIC SAMCEQUIPMENT_BOM SAMFUNCLOC_BOM	V V V V
	SAMC _FILE_EXTENSIONS SAMC _BOM_GENERIC SAMC _LEQUIPMENT_BOM SAM _FUNCLOC_BOM SAM _MATERIAL_BOM	V V V V
	SAMC_FILE_EXTENSIONS SAMC_BOM_GENERIC SAMC_D_COUIPMENT_BOM SAMFUNCLOC_BOM SAMMATERIAL_BOM SAMCLASSIFICATION_GENERIC	
CA_CLASSIFICATION	SAMC FILE_EXTENSIONS SAMC BOM_GENERIC SAMC DEOUPINENT BOM SAM _FUNCLOC_BOM SAM _CLASSIFICATION_GENERIC SAM _CLASS_TYPE	
CA_CLASSIFICATION	SAMC FILE_EXTENSIONS SAMC BOM_GENERIC SAMC DECUIPMENT_BOM SAM _FUNCLOC_BOM SAM _CLASSFICATION_GENERIC SAM _CLASS_TYPE SAM _CLASS_TYPE	 ×

2.2.2.3 Mobile Transaction History

With the *Mobile Transaction History* feature, SAP introduces the possibility for users to record all successful *CREATE* and *UPDATE* transactions from the mobile device in to the */SYCLO/MBL02* table. This provides insight into which objects are either created or changed via the mobile application, by whom, and when the changes are made.

To enable mobile transaction history logging for your mobile app, use one of the following options:

- 1. On the Mobile Application Configuration page (transaction /n/SYCLO/CONFIGPANEL), select the *Enable Mobile Transaction History* check box.
- 2. Run the program /SYCLO/CORE_RUNTIME_PARAM_PROG, select your mobile application and the parameter *ENABLE_MTRAN_HIST*.

O Note

If you specify a user ID, only transactions for that user will be logged. Otherwise, the runtime parameter will be applied to all users using the application.

To view and search mobile transaction history in the Syclo admin panel (transaction /n/SYCLO/ADMIN) through the *Mobile Transaction History Monitor* application:

- Open the transaction, click the Monitoring tab and select Mobile Transaction History Monitor
- Select a mobile application and view the mobile transaction history for this application.

③ Note

Use the *oMDO Id* and *Technical Entity Type* filters to filter by object type, and the *Object Key* filter to display individual objects.

O Note

To remove records from the *Mobile Transaction History* table, you can use the /SYCLO/ CORE_MTRAHIS_PURGE_PROG report.

2.2.3 Geospatial Service Definitions - GIS

A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

O Note

GIS is enabled by default. See the topic if you are using GEF (SAP Geographical Enablement Framework).

Geospatial data plays an important part in the daily operations of many organizations. By adding geospatial data to the technical data of an asset, you get a full picture of that asset.

The Geospatial Service Definitions page contains the following tabs:

- General Data
- Object Type Assignment
- Parameter Settings
- Data Rules

General Data Tab

Geospatial Service Defi	nition Detail (Display Mode)			
Create Copy	📋 Delete 🥖 Change			
General Data	Object Type Assignment Parameter Settings	Data Rules		
Basic Data				
Basic Data				
Service Id:	_GIS_QUERY_WORKORDER			
Description: G	eospatial query service for work order			
Mobile Application: S	AP Service and Asset Manager			
Coconctiol Com	ing lafe			
Geospatial Serv				
Service Host	<gis_host_name></gis_host_name>			Server Port:
Service Path	/arcgis/rest/services/ <feature_layer>/MapServer/<la< td=""><td>yer_no>/Query</td><td></td><td></td></la<></feature_layer>	yer_no>/Query		
HTTP RFC Destination				Use RFC Connection
Service Vendor	ESRI	Vendor Relea	ase:	
Well Known Id	4326			
Object Id Mappin	ng Into			
Mapping Type:	SAP OBJKEY <-> Geo OID mapping table	Mapping Table: /SN	/FND/OID01_GS	
Global Id Field Name:	GLOBALID	Field Type:	Character	
Object Id Field Name:	OBJECTID	Field Type:	Number	
Geospatial Serv	ice Provider Handler Info			
Service Provider Handl	er: /SMFND/CL_GIS_GEOSERV_ESRI : Gepspatial	service provider - ESF	21	
Provider Operation	/SMFND/CL_GIS_GEOSERV_ESRI : QUERY			
A				
Activation				
Active Flag:				
-				

General Data tab:

Basic Data

- Service ID: Required field. Name of the geospatial service ID, limited to 40 characters, with namespace protection. Use the Y or Z namespace.
- Description: Description of the geospatial service
- **Mobile Application:** Mobile application of the geospatial service. Every geospatial service is assigned to a specific mobile application.

Geospatial Service Info

• Service Host: Host name of the geospatial service provider

③ Note

The information in this field is used in the Target Host field in the Creating and Configuring an RFC Destination for Offline Maps [page 203] procedure.

- Server Port: Port number of the geospatial service provider
- Service Path: End-point URL of the geospatial service
- HTTP RFC Destination: RFC destination pointing to the GIS. By using the RFC destination, you can support various logon authentication methods of the geospatial service. If you use an RFC destination, service host, port, and path are not required.
- Use RFC Destination: Indicator that you must use an RFC destination to connect to GIS
- Service Vendor: Vendor name of the GIS provider.SAP uses Esri for its out of the box installation of the SAP Service and Asset Manager application.
- Vendor Release Version information of the GIS provider. The Esri version for SAP Service and Asset Manager 2310 is *ArcGIS iOS SDK 100.2.1* for iOS and *ArcGIS Runtime SDK for Android 100.3.0* for Android.
- Well Known ID: Well-known ID of the coordinate system

Object ID Mapping Info

- **Mapping Type:** Defines how the SAP object ID is mapped to the object ID in the geospatial service provider database. Select from the following:
 - No mapping: SAP object ID is the same as the object ID in the GIS provider database
 - SAP OBJKEY <-> GEO OID-mapping table: Mapping is stored in a mapping table
 - **Lookup Routing:** Use a lookup ABAP object-oriented class to determine the mapping dynamically. The ABAP object-oriented lookup class must implement the /SMFND/IF_GIS_OID_MAPPING interface.
- **Mapping Table:** SAP mapping table name, if used. The standard /SMFND/OID01_GS mapping table is the default. The standard /SMFND/GIS_OIDMAP_UPLOAD_PROG program is provided to load the table with a text file
- **Object ID Lookup Routine:** OID lookup routine name, if used. Used in conjunction with the *Lookup Routing* mapping type
- **Global ID Field Name:** Name of the Global ID field in the GIS provider database, if relevant. For example, in the Esri database, the global field name is *GLOBALID*
- **Object ID Field Name:** Name of the <Object ID> field in the GIS provider database, if relevant. For example, in the Esri database, the field name is *OBJECTID*
- Field Type Use the dropdown to select the type of field for both the <Global ID> and the <Object ID>
- Service Provider Handler: ABAP object-oriented class that handles integration to the GIS provider

• **Provider Operation:** ABAP OO class operation that handles integration to the GIS service provider.

Activation

• Active Flag Check the checkbox to activate the GIS query service

Object Type Assignment Tab

Use the *Object Type Assignment* tab to define what type of SAP objects are assigned to the geospatial service. You can define different geospatial services for different SAP object types.

For example, you can map equipment with polygon geospatial data to one geospatial feature layer. You can then map equipment with point geospatial data to a different geospatial feature layer.

G	eneral Data	Object Type As	signment	Parameter Settings	Data Rules			
Sen	rice Data							
		010.0		00050	oo			
	spatial Serv. Id:	_GIS_Q	UERY_WORK		GeoServ Category			
MOD	ile Application:				GeoAgent Handle	/SMFND/CL_GIS_GEOSERV_ESF	GeoServProvider Op:	QUERY
Assi	gnment Info							
	-							
Obj	ect Types As	signed						
	Logical System	Object Type	Object Grou	р	Active	Object Group 1		
		ORH			\checkmark			

Assignment Info

- Logical System: Logical system of the SAP object. A logical system is required to properly identify the SAP object if the mobile add-on aggregates data from different back-end systems.
- **Object Type:** Type of the object as it is identified in the mobile add-on. For example, the standard object type *IEQ* is used to identify the *Equipment* object.
- Object Group: Optional setting used to further group the objects in the same object type.
- Active: When the Active checkbox is marked, the assignment is active.
- Object Group 1: Optional setting used to further group objects of the same object type and object group.

Parameter Settings Tab

Use the *Parameter Settings* tab to define parameter settings for the service provider handler. The service provider handler can declare the list of parameters that might require input. If parameters are declared, they are displayed on this tab, and you can enter values for them.

Create Copy Chang	le		
General Data Object Type Assignment	Parameter Settings Data Ru	es	
Service Data GeoSpatial Serv. Id: Service Category: Service Provider Handler: //SMFND/CL_GIS_GEOS Operation Parameter Settings Operation Parameters > Parameters for Service Operation > Parameters for Service Operation		der Op: QUERY Vendor: ESRI	
✓ Provider Operation - QUERY	Parameter Info		
 Standard Parameter Parameter - Allow Client Input 	Parameter Name: Network	Protocol	NETWORK_PROTOCOL
Parameter - Authentication Token	Param. Description: Network	Protocol	
Parameter - Geometry	Mandatory:		
 Parameter - Network Protocol* Parameter - Output Fields* 	Enable Parameter:		
 Parameter - Output Format* Parameter - Output Spatial Reference 	Value Setting		
Parameter - Spatial Relation Function	Parameter Value: HTTP		
 Parameter - Spatial Relationship Parameter - WHERE Clause 			

Data Rules Tab

Use the *Data Rules* tab to define data rules. A data rule is used to transform input data to the service provider handler, before calling the geospatial service. For example, to dynamically assign values of object type, object group, and object group 1 to input data, use a data rule. Using a data rule influences which geospatial service is assigned to an input object.

General Data	Object Type Assign	mont	Parameter Se	ttingo	Data Rules		
General Data	Object Type Assign	Imeni	Parameter Se	ungs	Data Rules		
ervice Data							
eoSpatial Serv. Id:	_GIS_QUER	Y_WORKOR	RDER	Geo	Serv Category:		
Nobile Application:							
GeoAgent Handler:	/SMFND/CL_GIS_G	EOSERV_E	SF	GeoSe	ervProvider Op:	QUERY	
ata Rules							
ule List							
Logical system	Object Category	Data Rule	Rule Input	Active F			
Logical system	Object Category	Data Rule	Rule Input	Active F	ay		
ata Rule Deta	il						
				in all aventa a			
Object Category:			Log	ical systen	1.		_
Data Rule:			Log	icai systen	1.		
			Log	ical system			

Data Rule Detail

- **Object Category:** Type of the object as it is identified in the mobile add-on. For example, you can use the standard object type *IEQ* to identify the *Equipment* object.
- Logical System: Logical system of the SAP object. If the mobile add-on aggregates data from different back-end systems, the logical system is required to identify the object.
- Data Rule: Data rules are ABAP OO classes that implement the /SMFND/IF_GIS_DATA_RULE interface.
- Rule Active: If the checkbox is checked, the rule is active.

2.2.4 Geospatial Service Definitions - GEF

The SAP Geographical Enablement Framework (GEF) enables the augmentation of business data with spatial attributes for SAP S/4HANA applications. The framework allows SAP data to be used in GIS-based geoprocessing operations.

(i) Note

GIS is enabled by default. See the topic if you're using GIS (Geographical Information System).

GEF reduces, and in some cases, eliminates the need for complex synchronization between SAP and GIS systems. Business data can be combined with engineering data in a single map view independent of the user working with SAP tools or GIS tools, decreasing TCO, increasing the value of business data, and simplifying user interaction.

28

The framework provides an embeddable map-based UI for SAP S/4HANA applications to quickly geo-enable their business objects and support geospatial processes. It also exposes the geometries and attributes of geo-enabled SAP business objects as feature classes to be consumed via standard GIS tools.

The Geospatial Service Definitions page contains the following tabs:

- General Data
- Object Type Assignment
- Parameter Settings
- Data Rules

General Data Tab

As GEF is integrated directly to SAP S/4HANA systems, there's no need to call REST APIs outside of SAP S/4HANA. All information and coordinates are already stored as part of the system.

General Data tab:

Basic Data

- Service ID: Required field. Name of the geospatial service ID, limited to 40 characters, with namespace protection. Use the Y or Z namespace.
- **Description:** Description of the geospatial service
- **Mobile Application:** Mobile application of the geospatial service. Every geospatial service is assigned to a specific mobile application.

Geospatial Service Info

- Service Host: Automatically set to NO_HOST_NAME
- Server Port: Port number of the geospatial service provider
- Service Path: Automatically set to NO_SERVICE_PATH
- HTTP RFC Destination: RFC destination pointing to the GIS. By using the RFC destination, you can support various logon authentication methods of the geospatial service. If you use an RFC destination, service host, port, and path are not required.
- Use RFC Destination: Indicator that you must use an RFC destination to connect to GIS
- Service Vendor: Vendor name of the GIS provider. For GEF, automatically set to SAP.
- Vendor Release Not required for GEF
- Well Known ID: Not required for GEF

Object ID Mapping Info

- Mapping Type: Automatically set to No Mapping. Objects are directly integrated to GEF.
- Global ID Field Name: Not used for GEF
- **Object ID Field Name:** Automatically set to *GEF_OBJECTID*. Only used for visibility into which field is used.
- Field Type Use the dropdown to select the type of field for both the <Global ID> and the <Object ID>
- Service Provider Handler: Automatically populated with /MERP/CL_CORE_GIS_GEOSERV_GEF

③ Note

Custom handlers are supported.

• Provider Operation: Automatically populated with /MERP/CL_CORE_GIS_GEOSERV_GEF

Activation

• Active Flag Check the checkbox to activate the GEF query service

Object Type Assignment Tab

Use the *Object Type Assignment* tab to define what type of SAP objects are assigned to the geospatial service. You can define different geospatial services for different SAP object types.

For example, you can map equipment with polygon geospatial data to one geospatial feature layer. You can then map equipment with point geospatial data to a different geospatial feature layer.

Assignment Info

- Logical System: Logical system of the SAP object. A logical system is required to properly identify the SAP object if the mobile add-on aggregates data from different back-end systems. You can configure the following fields on the
- **Object Type:** Type of the object as it is identified in the mobile add-on. For example, the standard object type *IEQ* is used to identify the *Equipment* object.
- **Object Group:** Optional setting used to further group the objects in the same object type.
- Active: When the Active checkbox is marked, the assignment is active.
- **Object Group 1:** Optional setting used to further group objects of the same object type and object group.

Parameter Settings Tab

Use the *Parameter Settings* tab to define parameter settings for the service provider handler. The service provider handler can declare the list of parameters that might require input. If parameters are declared, they're displayed on this tab, and you can enter values for them.

There are two standard parameters: EAM Scenario and Output Format

The *EAM Scenario* parameter data mines the GEF scenario object. For each scenario, there's a corresponding business object:

EAM Scenario ID	GEF Business Object ID
EAM Equipment EAMS_EQUI	EAMEQUI
EAM Functional Location EAMS_FLOC	EAMFLOC
EAM Maintenance Notification EAMS_NOTIF	EAMNTF
EAM Maintenance Order EAMS_ORDER	EAMORD

You can assign different business objects for your system needs.

Output Format: The only supported parameter value is JSON.

Data Rules Tab

The Data Rules tab isn't used in GEF configuration.

2.2.4.1 Integrating Mobile Application Integration Framework (MAIF) with SAP Geographical Enablement Framework (GEF)

The integration point between the *Mobile Application Integration Framework (MAIF)* and *SAP Geographical Enablement Framework (GEF)* has been improved to include the ability to call geometry on the corresponding geo_id of a business object. Previously, this capability was not available and MAIF would call all geometries on each business object. This is undesirable because there may be a large amount of data stored at the business object level for users, and only some of it is relevant to day-to-day operations. This enhancement assumes that our users have GEF data segregated at the geo_id level.

The backend configuration is maintained in the GEF_FRW_CONFIG GEF (framework) configuration transaction. Selection of business objects from the hierarchy. This opens the maintained SAP business objects, such as work orders, equipment.

Dialog Structure	B	usiness Objec	cts				
System Settings		BO ID	Description	Schema Name in GIS Database	Prefix for Database	Table or View Name in	Extsn ID
Geometry Contexts		r	1	Schema Name in GIS Database	Pretix for Database	Table of view Name III	EXISTIL
C Icons for Symbols		L	Business Partner				
C Mass Actions		EAMEQUI	[EAMS] Equipment				EAM
C Action Parameters		EAMFLOC	[EAMS] Functional Location				EAM
V 🗇 Business Objects		EAMNTF	[EAMS] Notification	SAP_GEF	znotif_3857.	geom_multi	EAM
Geometry Context Assignments		EAMORD	[EAMS] Maintenance Order	SAP_GEF	zorder_bo_3857_ext.	geom_multi	EAM
✓ ☐ Geo Objects		EAM_MPLIT	[EAMS] Maintenance Plan Item				ZEAMS
√ ☐ Field Definitions		FL	Functional Location				ZEAMS
🗀 Field Map Provider Assign		LAMNW	LAM Network	SAP_GEF	z_gef_lrs_3857.	geom_lrs	
C Filters		OG	Oil & Gas				ZEAMS
~ 🗅 Actions		STREET	Street				
C Action Parameters		TAXCODE	Tax jurisdiction code				
Mass Action Assignments							
✓ ☐ Business Layers							
🗀 Fields							
C Geometry Layers							
Legends							

- 1. Select a business object, for the example EAMEQUI Equipment.
- 2. Once the row is selected, click on Geo Objects (sub-level) in the hierarchy.
- 3. The Geo Objects configuration is where the configuration for each equipment type (for the given example) is listed. Each of the geo-objects is a separate sub-type that can maintain geodata. Some of these geo-objects are not relevant to the mobile use case and must not be downloaded to the mobile device.

O Note

There are additional settings in the field and filter definitions in geo-objects (sub-hierarchy) that will exclude object instances from being fetched from the databases if these fields and filters are not met (this is not a MAIF specific configuration and must be maintained properly).

(i) Note

Additional configuration in MAIF is only maintained in the *Geospatial Service Definitions* section under the SAMXX_GEF_QUERY_XXX (XX (at the beginning) represents the mobile application version and XX (at the end) represents the business object at play). The current example is for SAM2310_GEF_QUERY_EQUIPMENT.

4. Navigate to the configuration panel and click on Geospatial Service Definition.

Mobile App. Integration Frame × +					
C i Idai2er1.wdf.sap.corp:44300/sap/bc/webdynpro/syclo/c	core_config_wb?sap-client=001&sap-language=EN#	0 * 📮 🛡 O 3	•== 0		
unchpad 🍖 Portal 🐷 WTS 🛅 SAP 🛅 Investments 🛅 New Con	cepts 🛅 Config Panels 🛅 BCP System 🛅 ServiceNow 🛅 Jira 🛱	HCP 🛅 ABAP 🛅 S/4 Cloud 🛅 Sol Exp	• 🛅 Al Bo		
Mobile Application Integration Framework Config	uration				
Welcome Alex Topalov System - ER1(001) Today - 14.11.2023			Log Off		
Mobile Application Configuration					
General Info	oData Channel Integration Settings	Change Detection Settings			
 Mobile Application Configuration 	oData Service Assignment	EFI Assignment			
Defines basic information about mobile applications, such as release, description.	Assign standard oData Service to the mobile application. oData service model will be generated based on configuration setting.	Enhancement Framework Implementation Trigger is assigned Exchange Objects.	to		
Component Assignments	oData Model Configuration	Exchange Object Configuration			
Define component assignment for user persona, features etc.	Mobile application oData Model definition for entity type, entity set, essociation, association set, navigation property etc	Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile application.			
Geospatial Framework Settings	OData Mobile Data Object Configuration	enaced and an e series of each none opposition			
Geospatial Service Definitions	Data extraction and distribution logic and rules are defined for				
Define Geospatial Service Provider Information, Object Type Assignment etc.					
Transaction Management Setting	RFC Channel Integration Settings	Push Framework Settings			
Inbound Transaction Queue Definition	Mobile Data Object Configuration	Push Scenario Definition			
Define Inbound Transaction Queue Settings	Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Push scenarios can be defined to push data to mobile device qualified datasets changed in the backend.	s when		
Data Staging Settings	BAPI Wrapper Configuration	Outbound Trigger Configuration			
Data Agent Definition	Agentry Integration BAPI Wrappers are assigned to Mobile Data Objects	Triggers to interface with external systems are defined.			
Define data store supplying agent settings.		Subscription Agent Definition			
Data Store Definition		Defines how subscription requests for backend system data a	re		

5. Select the mobile application filter for the mobile application you will modify, in this case SAP Asset Manager 2310, and open the full list of objects.

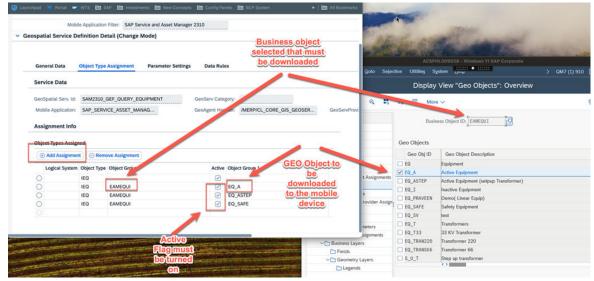
The configuration will only be applicable for GEF_QUERY geospatial services.

Mobile App. Integration Frame 🗙 🕂		
← → C a Idai2er1.wdf.sap.corp:44300/sap/b	z/webdynpro/syclo/core_config_wb?sap-client=001&sap-language=EN#	۵ 🖈
📑 Launchpad 🍖 Portal 🛩 WTS 🛅 SAP 🛅 Inves	rments 🛅 New Concepts 🛅 Config Panels 🛅 BCP System 🛅 ServiceNow 🛅 Jira 🛅 HCP 🛅 ABA	P 🖿
Welcome Alex Topalov System - ER1(001) Today -	14.11.2023	
ConfigPanel Home	Mobile Application Filter: SAP Service and Asset Manager 2310 V	
Geospatial Services by Mobile App	 Geospatial Service Definition Detail (Display Mode) 	
 SAP_SERVICE_ASSET_MANAGER_2310 	Create Copy Delete	
88 SAM2310_GEF_ADD_EQUIPMENT 88 SAM2310_GEF_ADD_FLOC	General Data Object Type Assignment Parameter Settings Data Rules	
응 SAM2310_GEF_ADD_NOTIFICATION 응 SAM2310_GEF_ADD_WORKORDER	Service Data	
응 SAM2310_GEF_QUERY_EQUIPMENT 양 SAM2310 GEF_QUERY_FLOC	GeoSpatial Serv. Id: GeoServ Category: Mobile Application: GeoAgent Handler:	
88 SAM2310_GEF_QUERY_NOTIFICATION	Assignment Info	
SAM2310_GEF_UPDATE_EQUIPMENT	Object Types Assigned	
SAM2310_GEF_UPDATE_FLOC		
SAM2310_GEF_UPDATE_NOTIFICATION	Logical System Object Type Object Group Active Object Group 1	
SAM2310_GEF_UPDATE_WORKORDER		
SAM2310_GIS_ADD_EQUIPMENT		
SAM2310_GIS_ADD_FLOC		
29 SAM2310 GIS ADD NOTIFICATION		

6. Click on SAM2310_GEF_QUERY_EQUIPMENT and select the *Object Type Assignment* tab. This table will allow replication of the geo_id which will be attempted to be downloaded.

③ Note

To successfully complete the download, all relevant geo_ids must be listed along with the corresponding business objects, and this still depends on the filters and fields in the GEF Framework configuration, which is the source of truth for the backend configuration.



7. Once the desired configuration has been replicated, go to the *Parameter Settings* tab and make sure that the global switch for downloading by business object is turned off. As a result, MAIF will stop downloading all geometries based on business objects only, and will strive to download objects by Geo Object ID, according to the replicated Geo Objects listed in Object Type Assignment as configured in this guide above

General Data Object	t Type Assignment	rameter Settings Da	ta Rules	
Service Data				
GeoSpatial Serv. Id:	SAM2310_GEF_QUERY_EC	QUIPMENT GeoSe	rvProvider Op:	QUERY
Service Category:			Vendor:	SAP
Service Provider Handler:	/MERP/CL_CORE_GIS_GEO	DSER		
Operation Parameter	Settings			
Operation Parameter	s t ⁻	Parameter Settings		
 Parameters for Servic Provider Operation 	1999-10-002002-2000-2000-2000-2000-2000-	Parameter Info		
✓ Standard Param	eter	Parameter Name:	Query By Bus	iness Object
Parameter	- EAM Scenario*	Param. Description:	Query By Bus	iness Object. Default: No, GEF GEOID
Parameter	- Output Format*	Mandatory:	0	
Parameter	- Query By Business Object*	Enable Parameter:		under al buck university of the state
L		Value Setting		wnload by business object master switch. Off means
		Parameter Value:	off ~	<u>ōwnload by Geo Object ID</u>

This configuration of geo-object identifiers must be replicated for work orders, functional locations, notifications, and equipment to ensure that geospatial data is downloaded for each of these objects.

2.2.5 OData Channel Integration Settings

2.2.5.1 OData Service Assignment

Gateway OData services implemented using the Mobile Integration Framework for SAP are different from the typical Gateway OData services.

The following requirements must be met for the Gateway OData services:

- Define the Gateway OData technical model using the generic model provider class of the Mobile Integration Framework /MFND/CL_CORE_ODATA_V2_MPC. You can maintain the OData technical model with transaction /IWBEP/REG_MODEL.
- Define the Gateway OData technical service using the generic data provider class of the Mobile Integration Framework /MFND/CL_CORE_ODATA_V2_DPC. You can maintain the OData technical service with transaction /IWBEP/REG_SERVICE.
- Assign the Gateway OData technical service to a mobile application by choosing the *OData Service Assignment* in the ConfigPanel.
- Do not define the Gateway OData technical model using the Gateway Service Builder. The model is determined and generated dynamically by the generic model provider class /MFND/ CL_CORE_ODATA_V2_MPC based on the model configuration settings defined in the ConfigPanel.

• The generic data provider class /MFND/CL_CORE_ODATA_V2_DPC doesn't provide the required business logic for the Gateway OData technical service. Business logic is provided by OMDOs. Assign every OData business request to the service to an OMDO. The assigned OMDO performs the necessary business logic for the business request.

Service Assignments

Mobile Application:	OAD ADDET MANAGED			Mobile App. Type: oData Application				
	SAP_ASSET_MANAGER_							
Mobile App. Desc.:	SAP Asset Manager	Release:						
Service Assignments	Composition Settings							
* oData Version	* oData Service	Active	Defer Batch Resp	Max Payload Records	Cache Handshake	Tech. Service Name	Service Version	
oData Version 2.0	/MERP/SAP_ASSET_CENTRAL_EXT_	~	~	100.000		/MERP/SAP_ASSET_CENTRAL_EXT_	0001	
oData Version 2.0	/MERP/SAP_ASSET_MANAGER	\checkmark	~	100.000		/MERP/SAP_ASSET_MANAGER_	0001	
oData Version 2.0	/MERP/SAP_CREW_MANAGER_	\checkmark	~	100.000		/MERP/SAP_CREW_MANAGER_	0001	
oData Version 2.0	/MERP/SAP_FIELD_OPER_WORKER_	\checkmark	\checkmark	100.000		/MERP/SAP_FIELD_OPER_WORKER_	0001	
oData Version 2.0	/MERP/SAP_ONLINE_LOOKUP_EXT_	\checkmark	\checkmark	100.000		/MERP/SAP_ONLINE_LOOKUP_EXT_	0001	

You can define the following settings for the OData service assignment:

- **OData Version:** OData version 2.0 is supported.
- **OData Service:** The Gateway OData technical service that is assigned to the mobile application. You can only assign a single mobile application to a Gateway OData technical service. Assignment to multiple mobile applications is not supported.
- Active: If the *Active* checkbox is checked, both the OData model and OData service are supported. If the checkbox is not checked, no OData model is generated for the service, and the data request to the service is not supported.
- **Defer Batch Response:** This setting is only relevant if you have an SAP S/4HANA back-end system. If the checkbox is checked, the Gateway runtime deferred batch response is enabled, which can improve performance during read request processing.
- Max Payload Records: Maximum number of records in the response payload to a read request. In case the read request is a batch request with multiple read requests, this setting defines the total number of records allowed in the overall payload, which is the aggregation of individual read request responses.
- Cache Handshake: When checked, the Gateway runtime metadata cache handshake is enabled for the service.
- Technical Service Name: Read-only information. Gateway OData technical service name.
- Service Version: Read-only information. Gateway OData technical service version.

Composition Settings

With service component composition, you can compose a complex service using component services.

In the following example, service /MERP/SAP_ASSET_MANAGER_1911 version 0001 is composed of service /MERP/SAP_ASSET_CENTRAL_EXT_1911 version 0001, service /MERP/ SAP_CREW_MANAGER_1911 version 0001, and service /MERP/SAP_FIELD_OPER_WORKER_1911 version 0001.

The entity model for service /MERP/SAP_ASSET_MANAGER_1911 version 0001 includes the entity model from /MERP/SAP_CREW_MANAGER_1911 version 0001 and the other two entity models listed. The entity model for service /MERP/SAP_CREW_MANAGER_1911 version 0001 only contains its own entities.

obile Application oData Service Assignment (Disp	lay Mode)	
Change		
bbile Application: SAP_ASSET_MANAGER_	Mobile App. Type: oData Application	on
bile App. Desc.: SAP Asset Manager	Release:	
Service Assignments Composition Settings		
Service Component Composition List		
Service Component Composition List		
Service Components	Enabled	
/MERP/SAP_ASSET_MANAGER_	✓	
/MERP/SAP_ASSET_CENTRAL_EXT_	\checkmark	
/MERP/SAP_CREW_MANAGER_	\checkmark	
 /MERP/SAP_FIELD_OPER_WORKER_ 	\checkmark	
/MERP/SAP_ONLINE_LOOKUP_EXT_	\checkmark	
		_
		_
		_
Service Component Detail		
* Parent oData Service:	Component oData Service:	
Enabled:		

To define a component composition, define the following:

- **Parent OData Service and Version:** Parent OData service. Entity model of a child OData service is included in the parent entity model. Association and navigation properties can be defined between parent service and component service.
- Component OData Service and Version: Child OData service
- **Enabled:** If the checkbox is not checked, the entity model of the component service is not included in the entity model of the parent service.

2.2.5.2 OData Model Configuration

OData service implemented using the Mobile Application Integration Framework does not use the Gateway Service Builder to define the OData model. Define the OData model using the OData Model configuration tool in the ConfigPanel. The runtime OData model is generated dynamically based on the configuration settings. The OData model configuration is mobile application-specific. You cannot share OData models across mobile applications.

Define the OData model configuration settings through the following screens:

Entity Set Tab

Entity configuration defines the OData entity type. Entity set configuration defines the OData entity set. In an OData model configuration, each entity type is limited to one entity set. Reuse of entity types by multiple entity sets or by different OData services is not supported.

Mobile Applicati	on oData M	lodel Detail (Display	(Mode)				
Create 🖺 C	opy 📋 Del	lete 🥖 Change					
* Entity Type Name:	Address				Active Flag:	V	Entity Type Id:
* Mobile Application:	SAP_ASSET_N	MANAGER_	kerager 1				
* oData Service Id:	-	CONTRACT OF A			Tech. Service Name:	/MERP/SAP_ASSET_MANAGER_	Version: 0001
* oMDO Id:	ADDR	ESS : Address			* oMDO Entity Type:	ADDRESS : /MFND/CA_ADDRESS_ENTITY_STR	
EntitySet	Property List	Association & Set List	Navigation Property List	Additional Setting	oMDO Assignment		
* Entityset Name:	Addresses						
Creatable:	✓ Upda	itable: 🗹 Deletable:	1				
Pageable:	Filter Req	uired:					

The following attributes are available for the *Entity Type* definition:

- Entity Type Name: Case-sensitive name of the entity type. The name must be unique within the OData service.
- Active Flag: If unchecked, the entity type is not included in the generated OData model
- Entity Type ID: Internal ID generated by the system to identify the entity type
- **Mobile Application:** Mobile application for the entity type. The OData model configuration is defined for individual mobile applications. You can reuse the entity type name in different mobile applications.
- Internal OData Service ID: Internal OData service ID that identifies the OData service for which the entity type is defined
- Service: Gateway technical service name of the OData service. Information is read-only.
- Version: Gateway technical service version. Information is read-only.
- OMDO ID: OMDO that provides business logic for the entity type and its entity set
- **OMDO Entity Type:** Technical entity type of the OMDO that is mapped to the OData entity type. Data for the OData entity type is supplied by the OMDO entity type.

The following attributes are available for the *Entity Set* definition:

- EntitySet Name: Case-sensitive name of the entity set. Must be unique within the OData service.
- Creatable: If checked, creation (POST) request for the entity set is supported
- Updatable: If checked, update (PUT / PATCH / MERGE) request for the entity set is supported
- Deletable: If checked, deletion (DELETE) request for the entity set is supported

- Pageable: If checked, paging is allowed for the entity set read request
- Filter Required: Not applicable for SAP Service and Asset Manager

Property List

Create 🔲 Copy 📋 Delete 🥖	Change													
ty Type Name: Address				Active Flag	. 🗸					Entity Ty	/pe ld:			
ile Application: SAP_ASSET_MANAGE	R_ III INT food through 1													
ata Service Id:	Contraction and Contraction		Tech.	Service Name	/MERP/S	SAP_ASSET	_MANAGE	R,		Ve	ersion: 000)1		
* oMDO Id: SAM ADDRESS : Ad	dress		* oMDO Entity Type: ADDRESS : /MFND/CA_ADDRESS_ENTITY_STR											
EntitySet Property List Assoc	iation & Set List Navigation Property List Ac	ditional Setting	oMD) Assignment										
*Property Name	*oMDO Field Name	Edm Type	Key	Creatable	Updatable	Sortable	Nullable	Filterable	Content Type	Max Length	Precision	Scale	FTan	Conversion Ex
AddressNum	ADDRNUMBER - CHAR (10) : Address nu	Edm.String								0	0	000000		ALPHA
Building	BUILDING - CHAR (20) ; Building Code	Edm.String								0	0	0		
City	CITY1 - CHAR (40): City	Edm.String								0	0	0		
Country	COUNTRY - CHAR (3): Country	Edm.String								0	0	0		
CountryVersionFlag	NATION - CHAR (1): Address Version	Edm.String								0	0	0		
FirstName	NAME_FIRST - CHAR (40) : First name	Edm.String								0	0	0		
Floor	FLOOR - CHAR (10): Floor	Edm.String								0	0	0		
HouseNum	HOUSE_NUM1 - CHAR (10) : House Number	r Edm.String								0	0	0		
LastName	NAME_LAST - CHAR (40): Last name	Edm.String								0	0	0		
Name	NAME1 - CHAR (40): Name	Edm.String								0	0	0		
PersonalAddress	PERS_ADDR - CHAR (1): pers. address	Edm.String								0	0	0		
PostalCode	POST_CODE1 - CHAR (10) : Postal Code	Edm.String								0	0	0		
Region	REGION - CHAR (3): Region	Edm.String								0	0	0		
RoomNum	ROOMNUMBER - CHAR (10) : Room Num	Edm.String								0	0	0		
											0			

You can configure the following on the *Property List* tab:

- Property Name: Case-sensitive name of the property
- **OMDO Field Name:** Field name of the OMDO technical entity type mapped to the property. The value of the property is supplied in the <OMDO Entity Type> field.
- EDM Type: Standard EDM type for the property
- Key Indicator: If checked, the property is the key property of the entity type
- Creatable: Not applicable for SAP Service and Asset Manager
- Updatable: Not applicable for SAP Service and Asset Manager
- Sortable: If checked, the property can be used for sorting
- Nullable: If checked, the property can have NULL value
- Filterable: If checked, the property can be used for filtering
- Content Type: If checked, the property value can represent content type
- Max Length: Maximum allowed length of the property value
- Precision: Decimal precision of the property, if relevant
- Scale: Decimal scale of the property, if relevant
- **ETag:** If checked, the property serves as the <ETag> field. You can set only one field as an <ETag> field in an entity type.
- Conversion Exit: Conversion exit for the property

Association & Set List Tab

An association defines the relationship between two entity types, with one entity type as the principle entity type, and the other as the dependent entity type. An association set defines the relationship between the two entity sets of the respective entity types in the association. In an OData model configuration, associations and association sets are child objects of an entity type, and each association can have only one association set defined.

When you define an OData model to use with OData offline SDK client application, you also define referential constraints for the association. Only key fields of the principle entity type can be used in referential constraints.

Type Name: Address						Active Flag:	v	Entity Ty	pe Id:
	SET_MANA	GER_ :	SAP Asset Manager						
ta Service Id:			1000				/MERP/SAP_ASSET_MANAGER		rsion: 0001
* oMDO Id:	ADDRESS	Address				* oMDO Entity Type:	ADDRESS : /MFND/CA_ADDRESS_E	ENTITY_STR	
EntitySet Property L	ist As	sociation &	& Set List Naviga	tion Property List Add	ditional Setting	oMDO Assignment			
ociation List									
Association Name		External	Principle Entity Type	Dependent Entity Type	Principle Cardina	lity Dependent C	ardinality OnDelete Cascade (Princ	iple) OnDelete Cascade (Dependent	0
Address_FunctionalLoca	ation		Address		1	01			
Address_WorkOrderPartner			Address		1	0n			
Address_NotificationPartner			Address	MyNotificationPartner	1	0n			
Address_Equipment			Address	MyEquipment	1	01			
Address_AddressComm	unication	unication Address		AddressCommunication	01	0n			
Address_RouteStop			Address	MyRouteStop	01	0n			*
			-						
Association Detail	Referentia	I Constrair	its						
ssociation Info									
Association Name:	Address	Notification	Header		External A	ssociation:		Association Id:	AND IN COMPANY OF LAST
Principle Entity Type Id:	/MERP/S	AP_ASSET	_MANAGER0001	Address					
Principle oMDO Id:	SAM _A	DDRESS			Principle Tech E	Intity Type: ADDRES	s		
Principle Cardinality:	1				Principle OnDelete	e Cascade:			
ependent Entity Type Id:	/MERP/S	AP_ASSET	_MANAGER0001	MyNotificationHeader					
Dependent oMDO Id:	SAN _N	OTIFICAT	ION_GENERIC		Dependent Tech E	Entity Type: NOTIFHE	ADER		
Dependent Cardinality:	01			D	ependent OnDelete	e Cascade:			
ssociation Set Info	n								
Association Set Name:		Notification	hHeader_ASet	Associat	ion Set Id:				

You can configure the following in the Association Info section:

- Association Name: Case-sensitive name of the association
- External Association: By default, the parent entity type of the association is the principle entity type. However, if the *External Association* flag is checked, the parent entity type of the association is the dependent entity type. An external association is commonly used when defining associations between entity types across component services.
- Association ID: A read-only internal GUID generated by the system that identifies the association
- Principle Entity Type ID: Lead entity type of the association
- Principle OMDO ID: Read-only OMDO ID to which the principle entity type is mapped to
- **Principle Tech Entity Type:** Read-only technical entity type of the OMDO ID to which the principle entity type is mapped to
- Principle Cardinality: Cardinality of the lead entity type
- OnDelete Cascade (Principle): If checked, the dependent entity type and entity set are automatically deleted when the principle entity type and entity set are deleted
- **Dependent Entity Type ID:** For standard associations, the dependent entity type can be any entity type belonging to the same OData service or child component service

- Dependent OMDO ID: Read-only OMDO ID to which the dependent entity type is mapped to
- **Dependent Tech Entity Type:** Read-only technical entity type of the OMDO ID to which the dependent entity type is mapped to
- Dependent Cardinality: Cardinality of the dependent entity type
- **Dependent OnDelete Cascade:** If checked, the principle entity type and entity set are automatically deleted when the dependent entity type and entity set are deleted

You can configure the following in the Association Set Info section:

- Association Set Name: Case-sensitive name of the association set
- Association Set ID: Read-only internal GUID generated by the system that identifies the association set
- **Principle Entity Set Name:** Read-only entity set name of the principle entity type. Each entity type in the OData model configuration can only have one entity set.
- **Dependent Entity Set Name:** Read-only entity set name of the dependent entity type. Each entity type in the OData model configuration can only have one entity set

You can configure the following in the *Referential Constraints* section (not pictured in detail in the example screenshot):

- Principle Entity Type: Read-only principle entity type of the association
- **Principle Property:** Principle property of the referential constraint. The principle property is the key field of the principle entity type.
- Dependent Entity Type: Read-only dependent entity type of the association
- **Dependent Property:** Dependent property of the referential constraint. The dependent property can be any field of the dependent entity type that has a foreign key relationship with the principle property.

Navigation Property List Tab

A navigation property represents a link from the parent entity type to a related entity types.

ADDITION CAD ACCET MANA	GER : SAP Asset Manager	Activ	ve Flag:		Entity Type Id:	-
a Application: SAP_ASSET_MANA	GER SAP Asset Manager	Tech. Service	Name: /MERP/SAP_ASSET_	MANAGER_	Version: 0001	
* oMDO Id:BUSINESS_	PARTNER : Business Partner	* oMDO Entit	ty Type: BUSPARTNER : /MEF	P/CORE_PARTNER_ENTIT		
EntitySet Property List As	sociation & Set List Navigation Property	List Additional Setting oMDO Assign	nment			
ty Type Navigation Proper	tiee					
ty Type Navigation Proper	105					
Navigation Property Name	*Technical Name	*Association	Principle Entity Type Name	Target Entity Type Name		
Address	ADDRESS	Address_BusinessPartner	Address	BusinessPartner		
AddressAtWork	ADDRESSATWORK	AddressAtWork_BusinessPartner	AddressAtWork	BusinessPartner		
AudiessAtwork						
Customer_Nav	CUSTOMER_NAV	BusinessPartner_Customer	BusinessPartner	Customer		
	CUSTOMER_NAV EQUIPMENTPARTNER	BusinessPartner_Customer BusinessPartner_MyEquipPartner	BusinessPartner BusinessPartner	Customer MyEquipPartner		
Customer_Nav	-	-				
Customer_Nav EquipmentPartner	EQUIPMENTPARTNER	BusinessPartner_MyEquipPartner	BusinessPartner	MyEquipPartner		
Customer_Nav EquipmentPartner FunctionalLocPartner	EQUIPMENTPARTNER FUNCTIONALLOCPARTNER	BusinessPartner_MyEquipPartner BusinessPartner_MyFuncLocPartner	BusinessPartner BusinessPartner	MyEquipPartner MyFuncLocPartner		
Customer_Nav EquipmentPartner FunctionalLocPartner NotificationPartner	EQUIPMENTPARTNER FUNCTIONALLOCPARTNER NOTIFICATIONPARTNER	BusinessPartner_MyEquipPartner BusinessPartner_MyFuncLocPartner BusinessPartner_MyNotifPartner	BusinessPartner BusinessPartner BusinessPartner	MyEquipPartner MyFuncLocPartner MyNotificationPartner		

You can define the following attributes for a navigation property in the Entity Type Navigation Properties table:

• Navigation Property Name:

- **Technical Name:** Case-sensitive name of the Internal technical name of the navigation property. The technical name is not case-sensitive.
- **Association:** Association for the navigation property. The navigation represents the link between the principle entity type and the dependent entity type.
- **Principle Entity Type Name:** Read-only principle entity type name of the association used by the navigation property
- **Dependent Entity Type Name:** Read-only dependent entity type name of the association used by the navigation property

Additional Setting Tab

ntity Type Name:	BusinessPartner	Active Flag:		Entity Type Id:	AND REAL PROPERTY AND ADDRESS OF
obile Application:	SAP_ASSET_MANAGER SAP Asset Manager				
Data Service Id:	and the set of the second second second	Tech. Service Name:	/MERP/SAP_ASSET_MANAGER	Version:	0001
* oMDO Id:	SAM30_BUSINESS_PARTNER : Business Partner	* oMDO Entity Type:	BUSPARTNER : /MERP/CORE_PARTNER_ENTIT'		
EntitySet	Property List Association & Set List Navigation Property List Additional Set	etting oMDO Assignment			

You can define the following additional settings for the OData model:

- Media Flag: If checked, the entity type is a media entity type
- Enable Structure Conversion Exit: If checked, the gateway automatically performs conversion exits for the entity type at runtime for both the request payload and the response payload

OMDO Assignment Tab

The OMDO Assignment tab only supports substitution configuration scenarios.

Use the following screenshot as an example. When a user posts a meter reading from their client, by default the reading is posted to the default OMDO, which here is *SAM<XX>_METER_READING*. However, if the user is reading a periodic meter, the reading is posted to the *SAM<XX>_MR_PERIODIC* OMDO, which is substituted for the default OMDO through the use of custom headers.

Mobile Application oData Model Detail (Dis	play Mode)		
🗋 Create 🚺 Copy 📋 Delete 🖉 Change			
* Entity Type Name: MeterReading		Active Flag:	Entity Type Id:
* Mobile Application: SAP_ASSET_MANAGER_: : SAP AS	set Manager	rouro ring.	Entry ()pola.
* oData Service Id:	oct manager -	Service: //MISU/SAP_ASSET_MANAGER_	Version: 0001
* oMDO Id: SAM METER READING ; Meter Re	ading	oMDO Entity Type: METERREADING : /MISU/BTX_METERREAD_	
	uung	SWED Entry type. WETERREADING . MICOUTA_INETERREAD_	
EntitySet Property List Association	& Set List Navigation Property List	Additional Setting oMDO Assignment	
Additional oMDO Assignment List			
oMDO Id	oMDO Entity Type	Allow Update Substitution	
SAM**_DEVICE	METERREADING	v	
SAM: _MR_PERIODIC	PERIODICMETERREADING	V	
Assignment Datail			
Assignment Detail			
* oMDO Id: SAM _DEVICE : Devic	es for Meter Management Component		
	U/BTX_METERREAD_ENTITY		
Enable Update Substitution:			

2.2.5.3 OData Mobile Data Object Configuration

An OData mobile data object (also known as OMDO) provides business logic for a business object used in an OData-based mobile application. An OMDO provides both technical implementation and configuration support for the represented business object, including all aspects of related operations such as object creation, update, deletion, or read and downloading. The OMDO also supports configuration such as data distribution rules for data download.

OData requests for a business object are mapped to an OMDO object. The OMDO handler then processes the requests for the OMDO object. For read requests, the OMDO handler considers and enforces the data distribution rules and other configuration settings, and determines the proper output response. For create, update, and delete requests, the OMDO handler creates or updates the SAP BusinessObjects in the back-end system as requested in the OData requests, and provides the relevant response.

General Setting Tab

oData Mobile Data Object Detail (Display Mode)	
Create Copy Change	
oMDO ld: SAM _WORKCENTER Description: Work Center	
Mobile Application: SAP Asset Manager	
oMDO Handler: //MERP/CL_PM_WORKCENTER_OD : oMDC	
General Setting Technical Model Info Data Filter Field Selection Change Detection Dependent Object Transaction Settings Outbound Trigger Assignment	
Read Request Process Flow	
Process Flow: Standard Flow using Key List Exempt Read Entity Request:	
Client State Settings	
Enable Client State Tracking: Image: Client State Reuse: Enable Periodic Refresh: Image: Refresh Frequency (Hour): Image: Client State Reuse: Image: Optimal Client State Reuse: Image: Client State Reuse: Image: Client State Reuse:	
Delta Sync Setting	
Support Delta Sync: 🔽 Data Distribution Mode: Distrib. key calculation if change or dep. queue detected	
Key Calculation using Client State History: 🗸 Delta Object Key List Setup Mode: Same as Data Distribution Keylist	
Server Side Paging Setting	
Enable Paging: 🗸 Paging Package Size: 5000	
Session Control Settings	
Sync Session Max Idle Time (Second): 0 Sync Priority: 1	
Localization Settings	
Enable Localization Setting: Language:	

You can set the following attributes on the General Setting tab:

- **OMDO ID:** ID of OData Mobile Data Object; limited to 40 characters. The OMDO ID must be unique in an SAP client, across all mobile applications, as namespace restriction is enforced. A customer-defined OMDO ID must use the Y or Z namespace.
- Description: Short description of the OMDO, limited to 60 characters
- **Mobile Application:** Mobile application of the OMDO. An OMDO always belongs to a single mobile application.
- **OMDO Handler:** An ABAP OO class that provides the technical implementation for the OMDO object. The OMDO handler must be a subclass of /MFND/CL_CORE_OMDO_HNDLER_BASE. You can reuse an OMDO handler to provide technical implementation for multiple OMDO objects.
- **Process Flow:** Determines how the OMDO handler processes OData entity set read requests. Based on the process flow setting, different OMDO handler methods are invoked at runtime. The OMDO handler determines which process flow it supports.
 - Standard Flow using Key List: Typically used by the OMDO handler to support complex SAP BusinessObjects with multiple entity types, complex relationships between entity types and data distribution rules, and with change detection support. Examples of SAP BusinessObjects that use the standard flow include transaction data objects such as work orders or notifications; and leading data objects such as equipment or functional locations.
 - **Basic Flow without Key List:** Typically used by the OMDO handler to support simple SAP BusinessObjects with a single entity type and no change detection support. Examples of SAP BusinessObjects that use the basic flow without key list include customizing data, such as plant

or order type. OMDO handlers that only support basic flow are typically subclasses from /MFND/ CL_CORE_OMDO_BASIC_HNDLR.

- **Exempt Read Entity Request:** If checked, the entity read request is handled by the *READ_ENTITY_REQUEST_PROC* method. The method supports on-demand entity read requests without interference with client state tracking for entity set read requests.
- Enable Client State Tracking: If checked, the client state records are maintained for each entity set read request. Client state tracking enablement is required for other features such as key list calculation using client state history, periodic refresh support, and optimized client state reuse.
 - **Client State:** Captures the list of calculated object keys that are sent to the mobile client for the entity set read requests, the data distribution rules used for the calculation, and the time of the calculation. By enabling client state management, the system has a record of the objects distributed to the mobile client. Enabling client state management also allows the system to calculate the list of objects to be removed from mobile client via tombstones.

At runtime, the client state info generated during client synchronization can be displayed using the client state monitor through the Administration & Monitoring Portal.

- Enable Periodic Refresh: If checked, every entity set delta sync read request is checked if it qualifies for periodic refresh. A periodic refresh means that if time between an entity set initial sync or last period refresh read request and current read request has exceeded the defined frequency, all objects from the client are removed and a new object key list is calculated based on the current data distribution rules.
- Refresh Frequency (Hour): Defines the periodic frequency refresh in number of hours
- **Optimal Client State Reuse:** If checked, the system tries to reuse previous client state records whenever possible instead of generating new client state records. Reuse of previous client state records can improve runtime performance. Whether a client state record can be reused depends on the object key list and data distribution rules. If both items remain unchanged compared to the previous client state, the client state record can be reused.
- Support Delta Sync: If checked, a delta token is generated and returned in response to the entity set read request
- **Key Calculation using Client State History:** This setting is effective only if client state tracking is enabled. If checked, the object key list is taken from current data distribution calculation, and the list is compared against the object key list from the previous client state. Also, objects that should be removed from the client are automatically identified, and downloaded to the client again.
- **Data Distribution Mode:** Controls when data distribution key calculation is performed for delta sync entity set read requests. It's only relevant if OMDO handler supports the *Standard Flow using Key List* process flow. There's overhead associated with data distribution key calculation. You can reduce the number of key calculations during sync to improve performance. However, the potential performance gain has to be measured against the correctness of the response. If the object key list from data distribution changes frequently, skipping the calculation can lead to incorrect results.
 - Always perform distribution key calculation: Perform the data distribution key calculation for every read request
 - **Distribution key calculation if change or dependent queue detected:** Perform data distribution key calculation only if there's data change detected in the back-end system, or if there are new dependent queue entries inserted
 - No distribution key calculation. Delta calculation only: Always skip data distribution key calculation in delta sync
- **Delta Object Key List Set up Mode:** Used in standard flow to determine how the delta object key list is initialized. The delta object key list determines the list of objects that are included in the delta sync response.

- Same as Data Distribution Key List: Default delta sync object key list is the same as the data distribution key list. If change detection is supported by the OMDO, we recommend using this setting. Remove objects that do not have changes since the last delta sync from the delta object key list to prevent unnecessary download and to improve performance.
- **Difference of Current and Last Data Distribution Key List:** The current data distribution key list is compared to the object key list from the last client state. The only objects that are not included in the last client state object list are included in the delta sync object key list. If no change detection is supported by the OMDO, we recommend using this setting.
- Enable Paging: If checked, server-side paging is activated. When paging is active, response from the OMDO to the OData request is limited to the specified paging package size. If the number of records in the response exceeds the paging package size, the response is divided into separate pages. The *\$skiptoken* identifies the next page that is generated and included in the response to the client. The client then sends a follow-up request with the skip token to retrieve the next page. This process continues until the client retrieves all pages.
- **Paging Package Size:** Maximum number of records that can be included in a page for the response of the OMDO. For read requests in a batch, the maximum payload records number defined for the OData service assignment is also considered. If the overall number of records in the batch response has reached the maximum payload records number, the number of records in the individual request response can be less than the paging package size specified.
- Sync Session Max Idle Time (Second): Estimated maximum duration of a sync session for a single OMDO. For requests belonging to the same OMDO, the response can be calculated beforehand for all requests once and then reused. When the requests are received separately, as long as the requests are received within the defined sync time duration, the response calculated beforehand can be used, instead of calculating it again. Calculating a response beforehand can improve performance. If the sync session max idle time is set to 0, each request triggers the calculation for the response.
- **Sync Priority:** Represents the processing sequence for read requests in a batch, where *O* has the first priority sequence. For OMDO objects with the same sync priority, OData read requests for these OMDO objects are processed based on the sequence in the batch.
- **Enable Localization Setting:** When checked, brings data associated with the OMDO fetch translated to the language specified in the <Language> field irrespective of what logon language is used for the connection. All other OMDOs that don't have *Enable Localization Setting* enabled use the logon language.
- Language: Used when the <Enable Localization Setting> box is checked. Select your desired language from the dropdown list.

Technical Model Info Tab

The *Technical Model Info* tab is a display only tab. This tab displays the technical entity model supported by the OMDO handler.

	oMDO Id:	SAM WO	RKCEN	ITER					[Description: Work	Center	
Mobile Ap	pplication:	SAP Asset N	lanager	r in the								
oMDC) Handler:	/MERP/CL_F	M_WC	RKCENTER	R_OD : oMDC							
General Setting	Technic	cal Model Info	D	ata Filter	Field Selection	Change De	tection De	ependent C	biect 1	Fransaction Settings	Outbound Trigger As	cianmo
Ocherar Octang	recimit				Tield Ociccion	onange De	Dealon	spendente	nojeci i	Tunsuellon Getting.		Significi
hnical Model	Detail											
Technical Entity 1	Гуре	Lead	Entity	Reference	e Structure		Field Descript	tion	Data Type	Conversion Exit	^	
▼ WORKCENTE	ER	Ŀ	/	/MERP/PI	M_WORKCENTER	ENTITY_STR						
MANDT		E					Client		CLNT 3			
OBJTY							Object Type		CHAR 2			
OBJID							Object ID		NUMC 8			
BEGDA							Start date		DATS 8			
ENDDA							End Date		DATS 8			
AEDAT_GF	RND						Changed on		DATS 8			
AENAM_G	RND						User Name		CHAR 12			
AEDAT_VC	ORA						Changed on		DATS 8			
AENAM_V	ORA						User Name		CHAR 12			
AEDAT_TE	RM						Changed on		DATS 8			
AENAM_TE	ERM						User Name		CHAR 12			
AEDAT_TE	СН						Changed on		DATS 8			
AENAM_TE	ЕСН						User Name		CHAR 12			
ARBPL							Work center		CHAR 8			
WERKS							Plant		CHAR 4			
VERWE							Work Center	Category	CHAR 4			
LVORM							Deletion Flag		CHAR 1			
PAR01							1st parameter	r	CHAR 6			
PAR02		Г					2nd paramete	er	CHAR 6		*	

- Technical Entity Type: Technical entity type that the OMDO handler supports
- Lead Entity: Indicates whether a technical entity is the lead entity type supported by the OMDO handler. The lead entity type represents the header record of a business object. An OMDO operates on a business object level. For an OMDO CREATE operation, a create request (POST request) for the lead entity type is required. If the lead entity already exists, a CREATE request (POST request) for nonlead entity types are considered as OMDO UPDATE operations.
- Reference Structure: Data dictionary structure of the technical entity type
- Field Name: Field name from the data dictionary structure
- Field Description: Field description
- Data Type: Field data type
- Conversion Exit: Assigned conversion exit for the field

Data Filter Tab

An OMDO handler can declare data filters and parameters supported by its CRUD (CREATE / READ / UPDATE / DELETE) operations. These filters are displayed on the *Data Filter* tab.

oData Mobile Data Object	Detail (Disp	lav Mode)							
· · · · · · · · · · · · · · · · · · ·	Delete 🥢 Chai)							
oMDO Id:	SAM WORK						Description:	Work Cer	nter	
Mobile Application:	SAP Asset Mana									
	/MERP/CL_PM_	-		4D(
UMDO Halfulet.	mentroc_nm_	NORROEIT	LI(_00 . 0)							
General Setting Technic	cal Model Info	Data Filter	Field S	election	Change Detection	Dependent Object	Transaction Se	ettings	Outbound Trigger Assig	gnment
Defined Filters	*	Rule E	ditor							
 Standard Filter 			Operation	READ			Filter Name:	PLANT	г	
CONTROL_AREA		OI	bject Name	CRHD		Refe	erence Field Name:	WERK	S	
COSTCENTER		Data Filte	er Rule Key	SAM _WO	ORKCENTER.READ.	PLANT				
PLANT*		Filter	Rule Type	User Profile	Parameter	~				
WORKCENTER										
WORKCENTER_CAT		Select	Param	eter						
		Parame	ter Id: W	RK	Descripti	on: Plant				
		Active	Flag: 🗸							
		Rule	List							
		1	Rule No.	Rule Type	Rule Value				Active Flag	
			00001	USERPARAM	WRK				v	

- **Defined Filters:** The *Defined Filters* navigation area displays the list of supported filters for the OMDO, grouped by operation and filter group. There are two types of filters available, though both types may not be available for every OMDO:
 - Standard Filter: A standard filter is a single field filter that references a table or structure field that is displayed in the <Object Name> field and the <Reference Field Name> field
 - **Table Filter:** A table filter is a structured filter that references a table or structure that is displayed in the <Object Name> field.
- **Rule Editor:** Details for a filter are displayed in this section when you select a filter from the *Defined Filters* section.
- Filter Rule Type: You can select one of the four types of rules to define:
 - Static Value in Range Table Format: Static rule, with the rule value defined at design time in the configuration
 - User Profile Parameter: Dynamic rule, with the rule value evaluated at runtime based on the runtime profile parameter value of the user. You can display and maintain the user profile parameter value with the transaction code *SU3*.
 - Mobile User Attribute: Dynamic rule, with the rule value evaluated at runtime based on the runtime mobile user attribute of the user. You can display and maintain the mobile user attribute in the Administration & Monitoring Portal, which you can access with the transaction /SYCLO/ADMIN. Then select Administration User Management .
 - Filter Handler: Dynamic rule, with the rule value evaluated at runtime by a filter handler. A filter handler is an ABAP subclass of /MFND/CL_CORE_OMDO_RULE_BASE.

Field Selection Tab

An OMDO handler can declare field catalogs supported for the READ operation. If there is a READ operation, by default, all of the fields from the database tables related to the OMDO object are selected. Using the field catalog, customers can control which fields are selected, and improve performance, as typically a mobile application doesn't require all of the fields.

Mobile Ap			DD : oMDC			Description: Work C	center		
General Setting	Technical Model Info	Data Filter	ield Selection	Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Assignmer	nt	
ld Selection D	etail								
							Search:		(
Field Catalog					Field Active	e Field Descrip	otion	Data Format	
▼ Table - /ME	RP/PM_WORKCENTER*								
Field - A	RBPL				v	Work center		CHAR(8)	
Field - K	OSTL				v	Cost Center		CHAR(10)	
Field - K	TEXT				\checkmark	Description		CHAR(40)	
Field - N	AME1				\checkmark	Name 1		CHAR(30)	
Field - O	BJID				✓	Object ID		NUMC(8)	
Field - O	BJTY				✓	Object Type		CHAR(2)	
Field - W	/ERKS				\checkmark	Plant		CHAR(4)	
FieldN	ODE1							NODE(0)	
Field - A	CHVM					Archiving ma	irker	CHAR(1)	
Field - A	стхк					Activity desc	r. key	CHAR(4)	
Field - A	CTXY					Activity desc	r. type	CHAR(1)	
Field - A	DRNR					Address		CHAR(10)	
Field - A	EDAT_GRND					Changed on		DATS(8)	
Field - A	EDAT_KOST					Changed on		DATS(8)	
Field - A	EDAT_TECH					Changed on		DATS(8)	
Field - A	EDAT_TERM					Changed on		DATS(8)	
Field - A	EDAT_TEXT					Changed on		DATS(8)	
Field - A	EDAT_VORA					Changed on		DATS(8)	
Field - A	ENAM_GRND					User Name		CHAR(12)	

Change Detection Tab

You can enable change detection for the OMDO using the Change Detection tab.

oData Mobile Data		Detail (Disp ete 🥒 Cha								
c	MDO Id:	SAN WORK	CENTER				Description: Work C	Center		
Mobile Ap	plication:	SAP Asset Mar	nage							
oMDO	Handler:	/MERP/CL_PM	_WORKCENTE	R_OD : oMD(
General Setting	Technical	Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Assignment		
Main Assignment										
main Assignment				Cheek	Change Info:					Work Center Exchange
				CHECK 3	change mio. 💌				Lead xChange Object:	work Center Exchange

- Check xChange Info: Applies to standard flow processing only. If checked, change detection info is checked to determine the delta sync object key list.
- Lead xChange Object: xChange object that supplies the change detection information for the OMDO. Information from the xChange table of the xChange object is read and used for the calculation of the delta sync object key list.

Dependent Object Tab

Define settings related to dependent objects on the Dependent Objects tab.

In some business cases, the read request sequence for the OMDOs or SAP BusinessObjects is important, since the data distribution object key list of a subsequent OMDO depends on the results or outputs of the precedent OMDOs. The subsequent OMDO is treated as a dependent object of the precedent OMDO. The leading OMDO is the source OMDO, as the output of the lead OMDO supplies information for the dependent OMDO. Dependent object key information generated by the leading OMDO is stored in the dependent object queue, and is used by the dependent OMDO during its read request processing.

For example, SAP Service and Asset Manager downloads detailed information for equipment and functional locations used in work orders assigned to a technician. To fulfill this requirement, read requests for work order assignments occur first, and equipment and functional locations are set up as dependent objects for the work order OMDO.

Mobile Applic		hange RKCENTER anager				Description: Work Ce	nter		
General Setting	echnical Model Info	Data Filter	Field Selection (Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Assignn	nent	
pendent Object Lis	t				Expiratio	n Time (Seconds):	0		
Source Tech. Entity	Туре			Dependent oMD	D Id		Dependent Tech. E	Entity Type	Active
ject Detail									
,			Source Technical Enti	ty Type:					
			Dependent of					Dependent Technical Entity Ty	rpe:
			Key Calculation	n Mode: Sou	rce Entity Type Output				
Dependent Object	Keys Origin Obj	iect Keys	Acti	ve Flag:					
Source Type	Value	Source oMDO F	Field Name		Dependent Object Ke	y Fieldname			

You can define the following settings for a dependent object of the current OMDO:

- **Source Technical Entity Type:** Source OMDO technical entity type that contains information required by the dependent object
- Dependent OMDO ID: ID of the dependent OMDO
- **Dependent Technical Entity Type:** Receiving technical entity type of the dependent OMDO, for which information from the source technical entity type is transferred
- Key Calculation Mode: Select the way the keys are passed to the OMDO. Key calculation is a dependent object concept; how you set up your dependent object is based on your source object.
 - Source Entity Output: Input for the dependent key. Keys are calculated based on the source entity type output.
 - Source Entity Type Distribution Key List: Dependent Object Key construction comes from the distribution key list of the source entity type. Using this option always collects all the valid keys from the source entity type.

- Source Entity Type Output + Target Entity Type Client State: Similar to Source Entity Output plus the previous client state of the target entity type. Here, what is being created for dependent object collection is a combined collection of the source entity type output and the target entity type client state records from the previous sync.
- Active Flag: Enable or disable a dependent object definition

You can define the following settings for the mapping info of dependent object keys in the *Dependent Object Keys* tab:

- **Source Type:** Use option *By Field Name* if the information comes from a field of the source technical entity type. Use option *By Value* if a constant value is used.
- **Source Value:** Constant value for a dependent object key field. This field is only relevant if the source type is set to *By Value*.
- Source OMDO Field Name: Name of the source technical entity type field that supplies value for the dependent object key. This field is only relevant if the source type is set to *By Field Name*.
- **Dependent Object Key Field Name:** Field name of the dependent technical entity type that receives the value from the source technical entity type field

You can define the following settings for the mapping info of origin object keys in the *Origin Object Keys* tab (not shown in detail in the example screenshot). The origin object key identifies the source OMDO object that has generated the dependent object key.

- **Source Type:** Use option *By Field Name* if the information comes from a field of the source technical entity type. Use option *By Value* if a constant value is used.
- **Source Value:** Constant value for an origin object key field. This field is only relevant if the source type is set to *By Value*.
- Source OMDO Field Name: Name of the source technical entity type field that supplies value for the origin object key. This field is only relevant if the source type is set to *By Field Name*.

You can display the dependent object queues generated during client synchronization at runtime using the *Dependent Queue Monitor* on the Administration & Monitoring Portal.

Transaction Settings Tab

You can define settings related to transactions (CUD requests) on the Transaction Settings tab.

oData Mobile Data Object	Detail (Dis	play Mode)							
Create 🚺 Copy 🞁 E)elete 🥖 Ch	ange							
oMDO Id:	SAN _WOR	KCENTER				Description:	Work Cen	ter	
Mobile Application:	SAP Asset Ma	nager							
oMDO Handler:	/MERP/CL_PM	_WORKCENTE	R_OD: oMD(
								0 H 17: 1 : 1	
General Setting Technic	cal Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Set	tings	Outbound Trigger Assignment	
Preprocessing Setting									
			Enable Transa	ction Merge:					

• Enable Transaction Merge: If checked, transaction requests for the same object that are received in the same changeset are merged. Therefore, the number of requests processed by the OMDO handler is reduced. The sequence of the transaction requests in the changeset is respected, with the attribute value of the last transaction request as the final value for the attribute.

For example, for *Object 123* the requests are as follows:

Requests in Changeset	Requests Processed by OMDO
Request #1 CREATE 123	None
Request #2 UPDATE 123	
Request #3 DELETE 123	
Request #1 CREATE 123	Request #1 CREATE 123 (attribute values from Request
Request #2 UPDATE 123	#2 and Request #3 are merged into Request #1)
Request #3 UPDATE 123	
Request #1 UPDATE 123	Request #1 UPDATE 123 (attribute values from Request
Request #2 UPDATE 123	#3 merged into Request #1)

Outbound Trigger Assignment

An outbound trigger performs a function that is implemented by the outbound trigger handler. Outbound triggers can be assigned to an OMDO. The assigned outbound triggers are invoked after OMDO processing has been completed, based on the sequence of the assignment.

	de)						
SAM WORKCENTER				Description	Work Cer	nter	
SAP Asset Manager							
/MERP/CL_PM_WORKCE	NTER_OD : oMDC						
al Model Info Data Filt	Field Selection	Change Detection	Dependent Object	Transaction	Settings	Outbound Trigger Assignment	
		Outbound Trigger		Process Mode	Active		
	elete Change SAM WORKCENTER SAP Asset Manager /MERP/CL_PM_WORKCEI al Model Info Data Filte	SAM WORKCENTER SAP Asset Manager //MERP/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Imment	elete Change SAM WORKCENTER SAP Asset Manager MERP/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Change Detection mment	elete Change SAM WORKCENTER SAP Asset Manager MERF/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Change Detection Dependent Object mment	elete Change SAM WORKCENTER Description SAP Asset Manager MERP/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Change Detection Dependent Object Transaction mment	elete Change SAM WORKCENTER Description: Work Cer SAP Asset Manager //MERF/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Change Detection Dependent Object Transaction Settings mment	elete Change SAM WORKCENTER SAP Asset Manager MERF/CL_PM_WORKCENTER_OD : oMDC al Model Info Data Filter Field Selection Change Detection Dependent Object Transaction Settings Outbound Trigger Assignment mment

You can set the following attributes when assigning an outbound trigger to an OMDO:

- **Technical Entity Type:** Optional. If defined, the outbound trigger is invoked only if the specified technical entity type was processed by the OMDO.
- OMDO Operation: Optional. If defined, the outbound trigger is invoked only if the specified OMDO operation is processed.
- Outbound Trigger ID: Assigned outbound trigger ID
- Process Mode: Only the *Always Run* mode is supported
- Active: Enable or disable an outbound trigger

2.2.6 Change Detection Settings

Change detection settings are used to define and configure how the mobile application, such as SAP Service and Asset Manager, communicates with SAP and the object tables contained within SAP

The following areas are used to configure backend change detection:

- Exchange Object Configuration: Change detection rules for SAP data objects, such as leading data and transaction data, defined for each mobile application
- EFI Assignment: Enhancement framework implementation trigger assigned to exchange objects

(i) Note

Create tables and objects in SAP and the Mobile Development Kit before you can create or configure information in the ConfigPanel.

2.2.6.1 EFI Assignment

Enhancement Framework Implementation (EFI) source code plug-ins are implemented by the SAP Mobile Add-On for each business object where you configure change detection.

The source code plug-in is provided as an ABAP include file. Each exchange object is assigned to a plug-in to handle the actual change detection process. EFIs are typically available across multiple mobile applications running on the same system.

EFIs collect before and after images of data in an SAP object that was created, modified, or deleted. The EFI then hands those images to the exchange object, which continues with the data processing. Therefore, link the EFIs to their corresponding exchange objects.

Enhancement Implementation Includes Section

The Enhancement Implementation Includes section is a tree of the include file list in the package. To expand the list, click the arrow to the right of the first item.

Enhancement Implementation Includes 😞
✓
員 /MERP/CL_CORE_BPADDR_EFI_EVT
員 /MERP/CL_CORE_BP_EFI_EVT
其 /MERP/CL_CORE_CABN_EFI_EVT
其 /MERP/CL_CORE_DRAD_EFI_EVT
員 /MERP/CL_CORE_KLAH_EFI_EVT
其 /MERP/CL_CORE_KSML_EFI_EVT
> 🗃 /MERP/EFI_CO
> 🗃 /MERP/EFI_MM
> 🗃 /MERP/EFI_PM
> 🗃 /MERP/EFI_WM
> 🗃 /MFND/EFI_CA
> 🗃 /SYCLO/CS
> 🗃 /SYCLO/MM

General Tab

Use the General tab to view and modify the general settings for chosen EFI file.

EFI Assignment Detail ((Display Mode)
Create Copy	Delete 🥖 Change
General Assig	nment
Enhancement In	nplementation Include File Info
EFI Type:	EFI Event Handler
* EFI Event Handler:	EFI Event Handler: Business Partner Address
Description:	EFI Event Handler: Business Partner Address
Package:	/MERP/EFI_CA

EFI Type: Select one of two options; Standard EFI Include or EFI Event Handler. Choosing Standard EFI Include is the traditional way to implement EFI and configure the EFI assignments. Selecting EFI Event Handler implements EFI using an ABAP class-based approach.
 When you use a class-based approach, EFI implementation is developed as a subclass of /SMFND/CL_CORE_EFI_EVENT_BASE. Available EFI event handler classes are displayed in the dropdown field. The EFI class-based approach provides a more robust functionality and is recommended for a new EFI implementation.

- EFI Include Name: File name of the source code plug-in
- **Description:** Short description of the EFI. The description field is automatically populated when you select the EFI include name and is read only.
- **Package:** Package where the EFI is located. The package field is automatically populated when you select the EFI include name and is read only.

Assignment Tab

Use the Assignment tab to modify the EFI assignments.

Create Copy	y 📋 Delete 🥖	Change				
General Ass	ignment					
	EF	Type: EFI Event Handler				
	EFI Event H					
			usiness Partner Address			
	Pa	ackage: /MERP/EFI_CA				
I Assignment	List					
EFI Include Nam	ne	Mobile Application	Exchange Object	Exch. Object Desc.	Active Flag	Use In Linkage Processing Only
/MERP/CL_COF	RE_BPADDR_EFI_EVT	SAP_ASSET_MANAGER_	SAM _BUSINESS_PARTNER	Business Partner Exchange	~	
ssignment De	tail					
ssignment De	tail SAP Asset Managei					
0		ARTNER - Business F				
Mobile Application:	SAP Asset Manager					
Mobile Application: Exchange Object:	SAP Asset Manager SAM BUSINESS_P	ange				
Mobile Application: Exchange Object: ixch. Object Desc.:	SAP Asset Manager SAM BUSINESS_P. Business Partner Exch. /MERP/CL_CORE_BU	ange PA_EX_HNDL	Use In Linkage Processing Only:			
Mobile Application: Exchange Object: ixch. Object Desc.: cchObject Handler: Active Flag:	SAP Asset Managei SAM BUSINESS_P. Business Partner Exch /MERP/CL_CORE_BU	ange PA_EX_HNDL	Use In Linkage Processing Only:			
Mobile Application: Exchange Object: Exch. Object Desc.: AchObject Handler:	SAP Asset Managei SAM BUSINESS_P. Business Partner Exch /MERP/CL_CORE_BU	ange PA_EX_HNDL	Use In Linkage Processing Only:			
Mobile Application: Exchange Object: ixch. Object Desc.: cchObject Handler: Active Flag:	SAP Asset Managei SAM BUSINESS_P. Business Partner Exch /MERP/CL_CORE_BU	ange PA_EX_HNDL	Use In Linkage Processing Only:			

- **EFI Information fields:** The EFI information fields at the top of the *Assignment* tab, like <EFI Type> and <EFI Event Handler>, are taken from information in the *General* tab and are read only.
- **EFI Assignment List:** Table that displays the plug-ins that are assigned to a specific include file. All column information is replicated in the *Assignment Detail* section directly below the table.
- Mobile Application: Read-only name of the specific mobile application
- Exchange Object: Name of the exchange object to which the EFI include file is assigned
- Exchange Object Description: Read-only description of the exchange object
- Exchange Object Handler: Read-only name of the class handler from the repository responsible for updating the exchange table
- Active Flag: When checked, the exchange object is in an active state. If unchecked, the EFI isn't linked to the assigned OMDO.
- Use in Linkage Processing Only: When checked, the xChange object is only allowed during linkage processing. If not checked, the original EFI is triggered during xChange processing.

2.2.6.2 Exchange Object Configuration

The exchange object defines what in the exchange table is updated in the exchange persistent layer, what class handler is called to update the exchange table, and what fields are related to the change detection.

Use the Configuration Panel to specify which changes are relevant to the mobile application and what conditions to satisfy for so that an update action is triggered. The *Exchange Object Configuration* panel has the following tabs:

- Technical Settings
- Change Detection Field Selection
- Change Detection Condition Filter
- Data Segment Settings
- Linkage Settings
- Push Settings

Technical Settings Tab

Use the Technical Settings tab to configure basic settings for an exchange object.

Use the <Exchange Object> field for the ID of the exchange object, limited to 40 characters. Type in a description in the <Exchange Object Description> field, limited to 60 characters. The <Mobile Application> field contains a dropdown where you can select your mobile application. The <Application Area> classifies the exchange object based on standard SAP application areas using a dropdown selection field.

The <Reference Business Object> is the standard SAP business object. The <Exchange Table Name> is the name of the table stored in SAP that contains the technical data. The <Exchange Table Description> is a brief description of the exchange table. The <Exchange Lock Object> field is used when updating the exchange table. Type in how many days you want to keep historical data in the <Days to Keep History> field. Check the <No Exchange Table Update> checkbox to not write the record to the exchange table in SAP when the record is changed.

- Handler Setting: Type in the name of the class handler from the repository that is responsible for updating the exchange table in the <Exchange Object Handler> field.
- **Collective Run Settings:** Define the condition where xChange processing is executed asynchronously as a V3 run by selecting one of the following mode options:
 - Dynamic: The collective run mode is determined at runtime by the xChange handler method DETERMINE_EXEC_MODE
 - Not Allowed: Not allowed to switch to collective run mode
 - Activated: Always execute asynchronously in V3 collective run mode
 - By User Parameter ID: Switch to V3 collective run mode for runtime user with the specified user parameter value set in the user profile
- Activation Setting: Check the <Active Flag> checkbox to ensure that the exchange object is in an active state. If unchecked, the exchange object performs no actions. When the <Use in Linkage Processing Only> checkbox is checked, the xChange object is only allowed during linkage processing and not if the original EFI was triggered during the xChange process.

The following screenshot shows an exchange process enabled for *MATERIAL*. Any changes for the MATERIAL leading data are recorded in the exchange table and are transmitted to the client during the next transmit.

xchange Object Detai	I (Display Mode)					
Create Copy	📋 Delete 🥖 Change					
Technical Settings	Change Detection Field Select	ction Change	Detection Condition Filter	Data Segment Settings	Linkage Settings	Push Settings
Exchange Object:	SAM MATERIAL		Exch. Object Desc.:	Material Exchange		
Mobile Application:	SAP Asset Manager					
Application Area:	Materials management					
Reference Business Ob	ject:					
Exchange Table Name:	/MERP/MATNR_EX		Exch. Table Desc.:	Exchange Table - Material I	Vlaster	
Exchange Lock Object:	/MERP/E_MATNR_EX		No Exchange Table Update:			
Days To Keep History:	180					
Handler Setting						
ExchObject Handler:	/MERP/CL_MM_MATNR_EX_HND	I.				
Collective Run S	Settings					
Collective Run Mode:	Dynamic					
Activation Settin	a					
Active Flag:	Use In Linkage Processing Only:					
Administrative Ir	nfo					
Created By:	Crea	ition Time Stamp:				
Last Changed By:	Chan	ged Time Stamp:				

Change Detection Field Selection Tab

The Change Detection Field Selection tab lets you optimize the change detection process for a mobile application. If a value change is detected for any fields within the group, the object identifier is written to the exchange table, indicating that a change was made. If the <Active Flag> is not checked for a field, any value changes made to that field are not detected and recorded to SAP during the exchange process. By default, all fields are initially checked.

The *Exchange Object by Application* tree lists all application areas and the exchange objects linked to each application area. Expand the tree by clicking on the arrows to the right of the application area to display the exchange objects associated with it.

- Exchange Object Info: The <Exchange Object> field is read only and is the ID of the exchange object. The <Exchange Object Description> is read only and is a brief description of the exchange object. The <Exchange Object Handler> field is read only and is the name of the class handler from the repository that is responsible for updating the exchange table.
- Exchange Object Field Selector: The <Field Catalog> column is comprised of non-editable rows of all fields that are detected by the class handler when changes are made. These fields are grouped by the technical table name of the SAP business object.

When the <Active Flag> checkbox is checked, either the table or a field within the table is active. Any value change to the selected field is detected by the class handler. Note that if you check the Active Flag checkbox on a table row, it selects all the rows within the table.

The <Short Description> is a read only field that contains a brief description of the table or of a field withint the table.

• Selection Proposal: In a typical mobile application installation, you do not want to have all fields marked as active for change detection. Rather, only the fields that are active on the odata mobile data object that are brought down to the mobile device will also be active in the exchange object. Based on odata mobile data object usage in the application, the selection proposal examines the active flags that are checked for an exchange object's table fields and provides recommendations to the administrator on which fields should be checked or unchecked.

See the following screenshot for an example of the enabled exchange object *MATERIAL*, where the properties of the object are captured and recorded in the exchange table. The properties that trigger the exchange are defined on this *Change Detection Condition Filter* tab, as seen in the checked <a ctive Flags>:

xchange Object Deta	il (Display Mode)							
Create Copy	y 📋 Delete 🥖 Change							
Technical Setting	Change Detection Field Selection	Change De	tection Condition Filter	Data Segme	ent S	ettings	Linkage Settings	Push Settings
F . I								
Exchange Obje	CUNTO							
Exchange Object:	SAM _MATERIAL	Exch. Ob	ject Desc.: Material Exch	nange				
ExchObject Handler:	/MERP/CL_MM_MATNR_EX_HND							
Evaluation Object	t Field Colorton					O a la ati	on Dronood	
Exchange Object							on Proposal	
	8	earch:		Li li		🞝 Gei		
Field Catalog		Active Flag	Short Description			Sort Op	otions	
Table - MAR			General Material Data			By Fie		
Field - LV		✓	DF at client level					
Field - MA		✓	Material				eld Description	
Field - ME		✓	Base Unit of Measure			ОВУЫ	NC Sequence	
Field - MT		✓	Material type					
Field - PR		✓	Product hierarchy					
	EV1/LULDEGRP		Loading Unit Group					
	EV1/LULEINH		Loading Units					
	EV1/NESTRUCCAT		Structure Category					
Field - /CV			Fixed Tare	5 0-ll-f				
	WM/TARUM		Ref.Unit of Measure TAR	E Calculation				
	WM/TOLGR		CW Tolerance Group					
	VM/VALUM		Valuation UoM					
			CW Material					
	SD/SL_TOLTYP		Tolerance Type ID Counting Group					
	SD/SV_CNT_GRP							
	SD/VC_GROUP		DSD Grouping Unit for Dimensions					
	APMP/ABMEIN							
			No. Vertical Layers					
Field - /SA	APMP/BRAD		Bending Factor		\mathbf{v}			

Change Detection Condition Filter Tab

The Change Detection Condition Filter tab lets you restrict change detection based on data content. For exchange handlers to support this feature, define data filter conditions for which the underlying SAP business object must qualify before the change detection process is triggered. The condition is defined at the table field level and is in the SAP range table format.

- Exchange Object Info: The <Exchange Object> field is read only and is the ID of the exchange object. The <Exchange Object Description> is read only and is a brief description of the exchange object. The <Exchange Object Handler> field is read only and is the name of the class handler from the repository that is responsible for updating the exchange table.
- Exception Settings: When the <Ignore Data Creation> checkbox is checked, newly created records and data are not processed to the exchange table. When the <Ignore Data Deletion> checkbox is checked, deleted records and data are not processed to the exchange table. When the <Ignore Data Update> checkbox is checked, updated records and data are not processed to the exchange table.
- Defined Filters: Lists all the data filters supported by the class handlers.
- Rule Editor: The <Filter Name> is read only and is the name of the filter as defined by the class handler developer in the class handler method. The <Reference Table Name> is read only and is the technical name of the SAP database table field where the filter is applied as defined by the class handler developer. The <Reference Field Name> is read only and is the technical name of the SAP database table field where the filter is applied as defined by the Class handler developer. The <Reference Field Name> is read only and is the technical name of the SAP database table field where the filter is applied as defined by the class handler developer. The <Data Filter Rule Key> is an internal technical key used by the framework at runtime.

Use the values in the *Enter Range Value* section to set the range. The <Sign> field is the value for the SAP range table column SIGN. The <Option> field is the value for the SAP range table column OPTION. The <Low Value> field is the value for the SAP range table column LOW. The <High Value> field is the value for the SAP range table column HIGH. When the <Active Flag> checkbox is checked, the rule is active. The *Rule List* is a table that displays a list of rules that are defined using the values in the *Rule Editor* and the *Range Value* sections.

The following screen shows that any exchange detected for the exchange object *NOTIFICATION* will be considered only if the notification is maintained in one of the roles defined in the *NOTIF_CATG* criteria.

Technical Settings Chang	ge Detection Field Selection	Change E	Detection Condition Filter	Data Segment Settings	Linkage Settings	Push Settings
Exchange Object Info						
Exchange Object Info						
Exchange Object: SAM NO	TIFICATION	Excl	n. Object Desc.: Notificati	on Exchange		
ExchObject Handler: /MERP/CL_	PM_QMNUM_EX_HND					
Exception Settings						
	re Data Deletion:	gnore Data Upda				
Ignore Data Creation.	re Data Deletion.	gnore Data Opda	le.			
Exchange Object Filter F	Pule Definition					
Defined Filters 🛛 😞	Rule Editor					
Filter - NOTIF_CATG*						
Filter - NOTIF_TYPE	Filter Name:	NOTIF_CATG				
Filter - PRIORITY	Reference Table Name:	TQ80	F	teference Field Name: QMT	YP	
Filter - PRIORITY_TYPE	Data Filter Rule Key:	SAM NOTIFIC	CATION./MERP/CL_PM_QM	INUM_EX_HNDLR.NOTIF_CA	ATG	
	Enter Range Valu	e				
	Sign: Inclusive	Option:	=			
	Low Value: 03 - Servi	e Notification				
		e Notification				
	High Value:					
	Active Flag: 🗸					
	Rule List					
	Rule No. Rule Ty	e Rule Value	Active Flag			
	-					
	00001 RANGE					
	00002 RANGE	IEQ01	\checkmark			

2.2.7 Push Framework Settings

2.2.7.1 Push Scenario Definition

Push scenarios define the trigger conditions, type of data, the mobile users receiving the data, and the users for the data.

A mobile client typically synchronizes with the SAP system by initiating a synchronization request to download the latest application data from the SAP system. Some mobile applications require the SAP system to send application data or push notifications to the client when certain trigger conditions are met. If these trigger conditions are not present, the mobile client does not initiate the synchronization request.

You define trigger conditions through the creation of push scenario definitions. Use the tabs found in the *Push Scenario Definition* page to configure a push scenario. The *Push Scenario Definition* page contains the following tabs:

• General Data

- Event Setting
- Outbound Trigger
- Subscription Settings

General Data Tab

Create Copy	Delete	🖉 Change			
General Data	Event Setting	g Outbound Trigger St	ubscription Settings		
Basic Data					
Scenario Id	SAM _EMER	RGENCY_WORKORDER_PUS	Alias:		
Mobile Application	SAP Asset Ma	inager			
Source Settir	ng		Distribution Set	ting	
Source Type:	Exchange Object	t	Distribution Type:	oData Mobile Data Object	
Source Object:	SAM _WORK_	ORDER_PUSH	Distribution Object:	SAM: _WORKORDER_PUSH	
Source Handler:	/MERP/CL_PM_	AUFNR_EX_HNDLF	Distribution Handler:	/MERP/CL_PM_WORKORDER_PUSH_	OD
Subscriber S	etting				
Su	bscriber Type:	All mobile users	Val	idity (Hr): 8	
Priority (0 - Highes	st, 9 - Lowest): ()			
Disable Owner Ori	iginated Push:	Check Mobile Transaction	n History: 🗌 🛛 History Inte	rval (Seconds): 0	
Notification S	Setting				
Email Notification:		No Data Package: 🗹			
Ema	il Subject:				
Email Message (1	40 chars):				
Activation					
Active Flag:	Enable Push H	listory: 🗌 Require Metadata:	Enable Fetch Call	pack:	
Administrativ	e Info				
Created By:	100100-0000	Creation Time Star	mp:		
Last Changed By:	0.000	Changed Time Star	mp: (

You can define the following attributes in the General Data tab:

- **Basic Data section:** Enter the ID of the push scenario in the required <Scenario ID> field, which is limited to 40 characters with namespace protection. Use either a Y or a Z namespace. Ensure that the ID is unique in the SAP system. Enter the name of the mobile application in the <Mobile Application> field, limited to 40 characters. Give an optional <Alias> to the push scenario. Multiple push scenarios can share the same alias, to allow central processing on the client side.
- Source Setting section: The <Source Type> defines how to trigger the push scenario. Two options are supported:
 - xChange Object: The push scenario is triggered when qualifying data is changed in the SAP system and change conditions defined in the xChange object are detected.

• Client on Demand Request: The push scenario is triggered based on a request from the mobile client. No data change in the SAP system is required. The client on demand request is not available for OData based mobile applications.

The <Source Object> applies to the source type of the xChange object. The xChange object determines the data change trigger for the push scenario. The <Source Handler> is the xChange handler assigned to your selected xChange object.

- **Distribution Setting section:** The <Distribution Type> defines what application data is sent and how recipients are determined. Two options are supported:
 - Mobile Data Object: Not supported for the SAP Service and Asset Manager application
 - OData Mobile Data Object: Use OData Mobile Data Object for the SAP Service and Asset Manager application. The assigned OMDO determines the recipients for the push notification.

When you select *OData Mobile Data Object* as a Distribution Type, assign an OMDO configuration object to the OMDO in the <Distribution Object> field. The <Distribution Handler> is the OMDO handler associated with the assigned OMDO configuration object.

• Subscriber Setting section: The <Subscriber Type> determines the user pool. The user pool is used to determine who receives the push notification. Enter the amount of time the push instance generated for the push scenario is valid, in hours, in the <Validity> field. The <Priority> is the processing priority of the push instance. A push instance with a higher priority is processed first.

When the *Disable Owner Originated Push* checkbox is checked, the user who made the change to the SAP data is excluded from the push recipient list triggered by the data change. When the *Check Mobile Transaction History* checkbox is checked, the SAP system only sends a push to the user if the user has previously downloaded the same SAP object and the object is still valid. This setting is commonly used for pushing time sensitive data such as workflow tasks to users.

Enter the <History Interval>, in seconds, to determine whether the object received by the user through a previous push is still valid. No push is sent to a user who has expired push data. The *History Interval* setting is linked to the *Check Mobile Transaction History* setting.

• Notification Setting section: When the *Email Notification* checkbox is checked, an email notification is generated to push recipients during push processing. The email address used is based on information defined in SAP user data or mobile user leading data defined in the Administration & Monitoring Portal. If email notification is enabled, type a subject in the <Email Subject> field. If email notification is enabled, type your e-mail in the <Email Message> field.

When the *No Data Package* checkbox is checked, no data payload is generated by push processing. Check this box to generate only push notifications. OData-based mobile applications such as SAP Service and Asset Manager only support push notifications without data payloads. Traditional, Agentry-based, mobile applications can support a data payload during push processing.

• Activation section: If the *Active Flag* checkbox is checked, the push is active. If the *Enable Push History* checkbox is checked, information about push recipients and data object keys are recorded in the push history table. If the *Require Metadata* checkbox is checked, technical data for the push data payload is generated. If the *Enable Fetch Callback* checkbox is checked, the mobile client retrieves data about the pushed SAP object using a regular sync request instead of precalculating the push data payload during push processing. Enabling push callback can ensure the client always receives up-to-date SAP data when receiving a push.

Event Setting Tab

General Data	Delete Change Event Setting Outbound Trigger Subscription Settings
Basic Data	
Scenario Id:	SAM _EMERGENCY_WORKORDER_PUS
Mobile Application:	SAP Asset Manager
ackground E	vent Setting Detail
Disable Backgrou	Ind Event Trigger: 🔽
Standard E	vent Setting
Event I	
Event Paramete	Г.
Rule Based	Event Setting
Push Event Rul	8:
RFC Setting	Detail
Enable qRFC Pr	cessing: 🗸
Oueue Cett	
Queue Sett	
Queue Name:	SAM EM_&OBJKEY&
qRFC Rule:	/SYCLO/CL_CORE_QRFC_ROUTINE : Standard routine for qRFC queue determination
Runtime Pa	Irameters
Allow Instance I	Merge: V Exclude Status SRV_COMP: V
Allow Instance I	

You can define the following attributes in the *Event Setting* tab:

- **Background Event Setting Detail setting:** If the *Disable Background Event Trigger* checkbox is *not* checked, a background event is raised during push processing.
- Standard Event Setting: The <Event ID> is the background event ID that is raised. The <Event Parameter> is the background event parameter.
- Rule Based Event Setting: The <Push Event Rule> is a routine that generates a dynamically formatted event ID and parameter based on supported runtime variables.
- **qRFC Setting Detail:** If the *Enable qRFC Processing* checkbox is checked, push processing is handled in the background as a qRFC call.

- Queue Setting: Enter the qRFC queue name used for push processing in the <Queue Name> field. The <qRFC Rule> is the routine that can generate a dynamically formatted qRFC queue name based on supported runtime variables.
- Runtime Parameters: If the Allow Instance Merge checkbox is checked, the creation of a new push instance cancels existing push instances for the same SAP object key that are not completed. If the *Exclude Status SRV_COMP*: checkbox is checked, push instances with a status of SRV_COMP are not reprocessed. If it is not checked, push instances with a status of SRV_COMP are reprocessed. Type in the time delay before processing a push sequence in the <Maximum Select Delay> field. The maximum select delay is used in qRFC push processing. Use this setting if there could be a time delay in the push instance registry table database update. The delay could allow the push registry data to fully update before the push processing starts.

Type in the number of times the push processor should try to read push instance information from the push registry if the read failed into the <Select Retry> field.

Outbound Trigger Tab

General Dat	ta Event Setting Outbound Trigger Subscription Settings	
asic Data		
asic Data		
Scenario	Id: SAN _EMERGENCY_WORKORDER_PUS	
obile Applicatio	on: SAP Asset Manager	
utbound T	rigger Setting Detail	
	d Trianen 🔽	
nable Outboun	ia ingger. 🗸	
	ance Processing: 🗸	
se Single Insta		
se Single Insta	ance Processing: 🔽	
se Single Insta ata Fetch Retry	ance Processing: 🔽	
se Single Insta ata Fetch Retry	y Wait (Seconds): 0	
se Single Insta ata Fetch Retry	y Wait (Seconds): 0	Active
se Single Insta ata Fetch Retry Putbound 1	ance Processing: y Wait (Seconds): 0 Triggers Assigned	Active
se Single Insta ata Fetch Retry Putbound 1 Seq. No.	ance Processing: y Wait (Seconds): 0 Triggers Assigned Outbound Trigger Id	
ese Single Insta ata Fetch Retry Putbound 1 Seq. No. 00001	ance Processing: y Wait (Seconds): 0 Triggers Assigned Outbound Trigger Id HTTP SAM WORKORDER_TRIGGER_SCPMS : /SMFND/CL_CORE_OTRIG_CPM	 ✓

Outbound triggers handle interfacing with external systems. You can assign multiple outbound triggers to a push scenario. Assigned outbound triggers are invoked at the end of push processing, based on the assigned sequence.

Check the Enable Outbound Trigger checkbox to activate the selected outbound trigger.

Subscription Settings Tab

To allow an on-demand subscription based push request from the mobile client, define the subscription setting in the *Subscription Settings* tab. Subscriptions allow the mobile client to trigger a push process instead of a traditional trigger by the back end SAP system update. OData based mobile applications do not support subscription-based on-demand push configuration.

Create Copy	Delete 🥒 Change
General Data	Event Setting Outbound Trigger Subscription Settings
Basic Data	
Scenario Id:	SAM _EMERGENCY_WORKORDER_PUS
Mobile Application:	SAP Asset Manage
Source Type:	Exchange Object
Source Object:	SAM _WORK_ORDER_PUSH Source Handler: /MERP/CL_PM_AUFNR_EX_HND
Subscription A Allow Subscription A	cription:

- Allow Subscription: Check to enable subscription-based push processing for the push scenario
- Subscription Agent ID: Displays the subscription agent assigned to handle the subscription request

2.2.7.2 Outbound Trigger Configuration

Outbound triggers allow a mobile application to interface with external systems such as the SAP Business Technology Platform.

You can integrate outbound triggers into one of the following mobile application processes:

- Push processing
- OData mobile data object processing

An outbound trigger can support only one of the two available processes. The process is determined by the outbound trigger handler. An outbound trigger handler can support any of the interface technologies, such as HTTP triggers, file triggers, and web service triggers.

The Outbound Trigger page contains the following tabs:

• General Data

• Parameters

General Data Tab

Create Copy	📋 Dele	te 🖉 Change		
General Data	Paramet	28		
Basic Data				
Outb. Trigger Id:	SAM	NORKORDER_TRIGGER_SCPMS		
Outb. Trigger Desc.:	Work Ore	ler Push Notification - SCPms		
Mobile Application:	SAP Ass	et Manager		
Trigger Handler	r Info			
Outb. Trigger	Handler:	/SMFND/CL_CORE_OTRIG_CPMS_PUSH : HTTP outbound trigger - SCPms oData Push Notification	Processing Type:	Push Processing
Outb. Trigg	ger Type:	HTTP based trigger		
HTTP RFC Des	stination:	SAM _SCPMS_PUSH_NOTIFICATION : sap.hana.ondemand.com		
Cloud Platform Mobile	e App. Id:	com.sap.sam).oauth		
Target Hos				
	Host IP:			
Target Host I		00000		
URL Identifi		IP Address		
	Protocol:	HTTP		
Min. Conn. Tir Check Re		0		
	arameter:			
Retry Setting				
Allow Retry	/: 🗸			
Maximum No. of Retry	/:	10 Retry Wait Period (Seconds): 0		
Activation				
Active Flag:				
Administrative I	nfo			
Created By:	1000	Creation Time Stamp:		
Last Changed By:		Changed Time Stamp:		

You can define the following attributes in the General Data tab:

Basic Data

- **Outbound Trigger ID:** Required field. Unique ID of the outbound trigger in the Y or Z namespace, limited to 40 characters.
- Outbound Trigger Description: Short description of the outbound trigger
- **Mobile Application:** Select your mobile application. The outbound trigger configuration detail is defined for the individual mobile application.

Trigger Handler Info

- **Outbound Trigger Handler:** ABAP OO class that provides the technical implementation for the outbound trigger. The outbound trigger handler must be a subclass of /SYCLO/CL_CORE_XXX You can reuse an outbound trigger handler to provide technical implementation for multiple outbound triggers.
- Processing Type:
- Outbound Trigger Type: Selection depends on the implementation of the outbound trigger handler

- HTTP RFC Destination: Only used when *HTTP-based trigger* is selected as the outbound trigger type. The HTTP RFC destination establishes a connection for the outbound trigger
- **Cloud Platform Mobile App ID:** used to interface with SAP Business Technology Platform Mobile Services. The ID identifies the mobile application ID that was set up in SAP BTP services.
- Target Host Name: Host name the outbound trigger is connecting to
- Target Host IP: IP address of the host to which the outbound trigger is connecting to
- Target Host Port Number: Port number of the host to which the outbound trigger is connecting to
- URL Identifier Type: Defines the information to use by the outbound trigger to make the connection
- Web Protocol: HTTP or HTTPS
- Minimum Connection Time (Seconds): Wait time before checking the response to an outbound trigger request from the remote system
- Check Response: If checked, a check response to an outbound trigger HTTP request is active
- Parameter: General purpose parameter that provides input information to the outbound trigger handler
- The following fields are only visible after other fields are selected:
 - Logical File Name: Used by outbound trigger type File Based Trigger
 - RFC Destination: Used by outbound trigger type Remote Function Call
 - RFC User ID: Used by outbound trigger type *RFC User ID*. User ID to make the RFC call.

Retry Setting

- Allow Retry: If checked, the outbound trigger is allowed to rerun
- Maximum Number of Retry: Set the maximum number of times the outbound trigger can rerun
- Retry Wait Period (Seconds): Set the minimum wait time between output trigger retries

Activation

If the Active Flag checkbox is not checked, the outbound trigger is not enabled.

Parameters Tab

An outbound trigger handler can declare special purpose parameters. If parameters are declared, they are displayed in the *Parameters* tab. You can declare any number of parameters. A parameter can be a single field parameter or a structured record.



2.2.8 Technical Settings

Technical settings affect all components of the framework.

App. Logging Level:	Error	Enqueue Wait Time (Sec):	0	
Internal Conv. Exit Active:	✓	External Conv. Exit Active:	✓	Range Parameter Check Active:
Statistic Collection Active:	\checkmark	Collection Mode:	Asynchronous - BAPI Call	

The following fields make up the Technical Settings page:

- **Application Logging Level:** Defines the logging level for all framework components. Logging entries are recorded in the SAP application log database under the object /syclo/. The logging levels are:
 - No logging
 - Abort
 - Error
 - Warning
 - Info
 - Debug
 - Trace
- Enqueue Wait Time (Sec): The Enqueue Wait Time parameter controls the number of seconds the underlying component should continue to try to access a locked SAP object in intervals of 1 second during an update by a mobile device. The update process aborts if accessing the locked object is still unsuccessful after the wait time.
- Internal Conversion Exit Active: When checked, the framework runtime data manager performs a standard SAP external-to-internal format conversion exit for all inbound BAPI parameters. The option is enabled by default. An application developer should only change this setting as it has a direct impact to the SAP Service and Asset Manager application.
- External Conversion Exit Active: When enabled, the framework runtime data manager performs standard SAP internal-to-external format conversion exit for all outbound BAPI parameters. This option is enabled by default. An application developer should only change this setting as it has a direct impact to the SAP Service and Asset Manager application.
- Range Parameter Check Active: When enabled, the framework runtime data manager performs checks on all SAP range parameters of inbound BAPI parameters. The SAP range parameter has the structure of SIGN, OPTION, LOW and HIGH. If SIGN and OPTION are not specified, a check routine sets SIGN to I and OTPION to EQ. This option is enabled by default. An application developer should only change this setting as it has a direct impact to the SAP Service and Asset Manager application.
- **Collection Mode:** Collection mode determines how system statistic records are written to the database. Two modes are supported currently: Synchronously and Asynchronously. When you select Synchronously, the statistics record is written to the database in real-time during BAPI calls. However, selecting this option incurs a performance penalty. Selecting Asynchronously means that statistics are collected in-memory and written asynchronously to the database at the end of the BAPI call.
- Statistic Collection Active: When enabled, the framework records all runtime statistics associated with the BAPI calls between the middleware server and SAP. This collection provides data for the KPI statistics collections found in the Administration portal. An application developer should only change this setting as it has a direct impact to the SAP Service and Asset Manager application.
- Created By, Creation Time Stamp, Last Changed By, Changed Time Stamp: The user ID and time stamps are automatically logged when a record is created or changed.

2.2.9 Mobile Authorization Settings

You can define security rule settings for the Mobile Integration Framework for SAP and mobile applications as well.

System Security	Product	Security	Mobile Data	Object Handler Security	oData Mobile Da	ata Object Handler Secu
curity Check	Rule List					
🛃 Add Rule	Delete Rul	е				
Rule Type Ot	oject Name	Authorizati	on Field Name	Authorization Field Value	Sys. Admin Ind.	
User Role						
ule Detail (Creation	on)					
Security Rule	Туре					
Rule Type: User F		~				
elect A User	Role					
F	Role:			Ъ		
Na	ame:					
System Admin Indic	ator:			\sim		
security checks following levels		d out by t	he Mobile In	tegration Framework	at runtime, with	n checks performed
System						
-	lependent	. Applies	to all compo	nents built on the Mol	bile Integration	Framework.

- Product
 - Security at the mobile application and product level
- *Mobile Data Object Handler* Specific to a Mobile Data Object class handler
- OData Mobile Data Object Handler Specific to an OData Mobile Data Object class handler

The following types of security rules can be defined:

• User Role Rules based on predefined user roles

- Authorization Profile Rules based on predefined authorization profiles.
- Authorization Object Rules based on predefined authorization objects.

Special Security Role with System Indicator

You can define special security rules using user roles. These security rules can be assigned with system indicators. These special security rules with system indicators are used to limit access to the ConfigPanel and Administration & Monitoring tools. The following system indicators are available:

System Administrator

If security rules are defined, only users with the required user role can have full access to the Administration & Monitoring tool.

- System Administration View Only If security rules are defined, only users with the required user role can have read access to the Administration & Monitoring tool.
- System Configurator If security rules are defined, only users with the required user role can have full access to the ConfigPanel.
- System Configuration View Only If security rules are defined, only users with the required user role can have read access to the ConfigPanel.

2.3 Enabling EPD Visualization

Prerequisites

- 1. Customize the EPD tenant. For more information, refer to the SAP Product Model View Administration Guide guide.
- 2. Install and configure PMV. For more information, refer to the SAP Product Model Viewer 📌 overview.
- 3. Create SSAM sub-account and customize the mobile services application.
- 4. Create a visualization destination within the SAP Service and Asset Manager app. For more information, refer to the Configure the Mobile Application chapter of the SAP Product Model Viewer Administration Guide.

③ Note

For EPD visualization integration with the SAP Service and Asset Manager app to work properly, both the EPD and SAP Service and Asset Manager tenants must be set up in the same SAP BTP region.

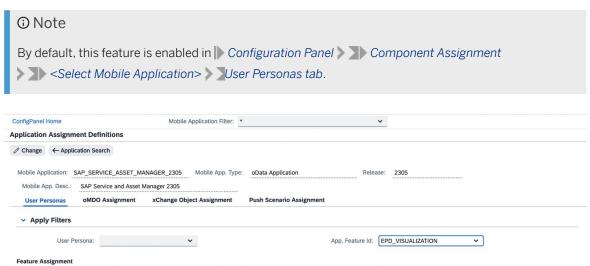
To preconfigure the SAP Product Model Viewer (PMV), refer to the Overview chapter of the SAP Product Model Viewer Administration Guide.

Context

EPD visualization in the SAP Service and Asset Manager is available by enabling the feature in the configuration panel. The feature is only available for the Maintenance Technician and Field Service Technician personas.

Procedure

1. To enable or disable the feature, check or uncheck the Active Flag box and save.



Displa	ay Option 🗸						
	User Persona	User Persona App. Feature Id					
0	FIELD_SERVICE_TECHNICIAN	EPD_VISUALIZATION	(2)	8			
0	INVENTORY_CLERK	EPD_VISUALIZATION	0	0			
0	MAINTENANCE_TECHNICIAN	EPD_VISUALIZATION	(2)	(2)			
0	SAFETY_TECHNICIAN	EPD_VISUALIZATION	0	0			
				\bigcirc			

- 2. To use EPD visualization in the SAP Service and Asset Manager app,maintain the application parameters in the ConfigPanel. Navigate to Application Configuration <-> <select Mobile Application> Parameters tab 3.
- 3. Depending on which object is configured in the EPD, choose an option:
 - To maintain usage ID: Param. Value: Usage ID for equipment/functional location/material from EPD (example values: As-Maintained/As-Installed/As-Designed)

bile App. Desc.:	SAP Service and Asse	t Manager 2305						
lication Para	motors							
incation r ara	inetera							
rameter List								
Import/Export					Sea	rch: EPD		
RecNo	Parameter Gro	Param. Name	Param. Value	7	Scope	Dep. RecNo	Active	No Change
000000223	EPD_USAGE	USAGE_IEQ	<enter equip="" for="" fro<="" id="" td="" usage=""><td>m EPD></td><td>Application</td><td>0000000000</td><td>1</td><td></td></enter>	m EPD>	Application	0000000000	1	
000000224	EPD_USAGE	USAGE_IFL	<enter floc="" for="" from<="" id="" td="" usage=""><td>EPD></td><td>Application</td><td>000000000</td><td>\checkmark</td><td></td></enter>	EPD>	Application	000000000	\checkmark	
000000225	EPD_USAGE	USAGE_MAT	<enter for="" id="" materials<="" td="" usage=""><td>from EPD></td><td>Application</td><td>000000000</td><td>\checkmark</td><td></td></enter>	from EPD>	Application	000000000	\checkmark	
000000039	EXPENSES	ExpenseActivityType			Application	000000000	\checkmark	\checkmark
000000040	EXPENSES	ExpenseWorkCenter			Application	000000000	\checkmark	\checkmark
000000041	EXTERNALCON	ARCGIS	ARCGIS_CONNECTION_TO	KEN_URL	Application	000000000	\checkmark	
000000218	GIS	Authorize.URI	https://www.arcgis.com/sharin	g/rest/oauth2/authorize	Application	000000000	\checkmark	
000000221	GIS	Client.ID	<oauth2 application="" client="" id<="" td=""><td colspan="3"><oauth2 application="" client="" id=""></oauth2></td><td>1</td><td></td></oauth2>	<oauth2 application="" client="" id=""></oauth2>			1	
000000222	GIS	Enable.NameUser.Auth	Y	Y		000000000	\checkmark	
000000217	GIS	Portal.URI	https://myarcgis.portal.com		Application	000000000	1	
	eter Group: EPD_U			Param. So	000'			
	UDAOL				reppirou	ion		
	SERIO V	Jsage ID for Equip from EPD>		Use Language Specific Va				
Rule Id				Use Rule:				
Dependent Pa								
Dependent Parame								
Dependent Param								
		and ID for Environment						
	Comment: EPD Us	age ID for Equipment						
A	Active Flag:							

- To maintain key usage for objects:
 - Param. Name: Usage key from the EPD customization (ex: Equipment_ID/FuncLocID/Material)
 - **Param. Value:** Key field of the object or entity type. Note that *EquipID*, *FuncLocId*, and *MaterialNum* are configured by default.

	SAP Service and Asset N	lanager 2305						
plication Para	ameters							
rameter List								
Import/Export				Sea	rch:			
RecNo	Parameter Gro 🔻	Param. Name	Param. Value	Scope	Dep. RecNo	Active	No Change	
000000226	USAGE_IEQ	<name epd="" from=""></name>	EquipId	Application	0000000000	~		
000000227	USAGE_IFL	<name epd="" from=""></name>	FuncLocid	Application	0000000000	1		
000000228	USAGE_MAT	<name epd="" from=""></name>	MaterialNum	Application	0000000000	1		
0000000190	WCM	Approval.Show	Y	Application	0000000000	1	1	
000000191	WCM	DocumentItem.SignatureEnabled	Y	Application	0000000000	1	1	
0000000202 WCM		LockNumber.Mandatory	N	Application	0000000000	1	\checkmark	
000000135	WORKORDER	DescriptionLength	40	Application	000000001	1	1	
000000136	WORKORDER	GoodsReturnMovementType	262	Application	000000000	1	1	
000000137	WORKORDER	MovementType	261	Application	000000001	\checkmark	1	
0000000138	WORKORDER	OrderType	PM02	Application	000000001	1	1	
aramatar D-								
Parameter De		Q						
Param Par	ram. Name: <name from<="" td=""><td></td><td>Param. Sco</td><td>Applica</td><td>lion</td><td></td><td></td><td></td></name>		Param. Sco	Applica	lion			
Param Par			Use Language Specific Va	lue:	tion			
Param Par	ram. Name: <pre></pre>			lue:	lion			
Param Par Pa	ram. Name: <pre></pre>		Use Language Specific Va	lue:	lion			
Param Par Pa Rule Io Dependent Pa Dependent Param	ram. Name: <a>rame fror ram. Value: EquipId d: arameter Id: eter Group:		Use Language Specific Va	lue:	lion			
Param Par Pa Rule Ic Dependent Pa Dependent Param Dependent Param	ram. Name: <name fror<br="">rram. Value: Equipid d: arameter Id: leter Group: neter Name:</name>		Use Language Specific Va	lue:	lion			
Param Par Pa Rule Io Dependent Pa Dependent Param	ram. Name: <name fror<br="">rram. Value: Equipid d: arameter Id: leter Group: neter Name:</name>		Use Language Specific Va	lue:	lion			
Param Par Pa Rule Ic Dependent Pa Dependent Param Dependent Param	ram. Name: cname fror raram. Value: EquipId d: arameter Id: leter Group: heter Name: eneter Value:		Use Language Specific Va	lue:	lion			

2.4 Low Code No Code Support

Context

The object detail screens in SAP Service and Asset Manager can be modified to include properties of the oData entity set that are not part of the detail screen out of the box. To do this, simply change the backend configuration and then synchronize with the mobile client.

Procedure

- 1. Log on to the SAP system and execute the transaction code /SYCLO/CONFIGPANEL.
- 2. Log on to the Configuration Panel.
- 3. Navigate to oData Model Configuration.
- 4. Open SAP_SERVICE_ASSET_MANAGER_2310 and find the entity you want to change on the mobile client.
- 5. Navigate to the *Property List* tab and select the new oData entity set property that should appear on the object detail screen. (Custom Z properties are also supported).
- 6. Click the *Extension* check box.

The Extension Attributes section appears.

ata Service Id:		531EDDBCE2905306772		/MERP/SAP_SRV_/	SSE	T_MANAG			Version:													
* oMDO ld:	-	RK_ORDER_GENERIC						* oMDO Ent	ity Type:	WOHEADE	R : /MERP/P	M_WOHEADER	_ENTITY_STR	~								
Active:	By Feature	~	App. Feature Id:	PM_WORK_ORDER	\$	~																
EntitySet	Property List	Association & Set List	Navigation Property List	Additional Sett	ng	oMDC) Assign	ment														
Add Property	Propose	Properties 🔂 Delet	e Property																			
*Property Nam	ю		*oMDO Field Name		c	Creatable	Key	Updatable	Sortable	Nullable	Filterable	Content Type	Max Length	Precision	Scale	ETag	Conversion Exit	Disable	be	Edm Type		Extensio
MainWorkCer	nter		*VAPLZ - CHAR (8): Main W	lorkCtr	~								8	0	0			No	~	Edm.String	~ [1
MainWorkCer	nterPlant		"WAWRK - CHAR (4): Pint V	VorkCenter	~								4	0	0			No	\sim	Edm.String	~ [3
Maintenance	ActivityType		*ILART - CHAR (3) : MaintAc	tivType	~						v		3	0	0			No	\sim	Edm.String	~ [
Maintenancel	Plant		*WERKS - CHAR (4) : Plant		~						v		4	0	0			No	~	Edm.String	~ [_
NotificationNet	umber		*QMNUM - CHAR (12): Notif	fication	~								12	0	0		ALPHA	No	~	Edm.String	~ [1
ObjectKey			*OBJKEY - CHAR (100) : Ob	Key for MobileSta	~								100	0	0			No	\sim	Edm.String	~ [_
ObjectNumbe	r		*OBJNR - CHAR (22) : Object	t number	~								0	0	0			No	\sim	Edm.String	~ [
ObjectType			*OBTYP - CHAR (3): Object	Category	~								3	0	0			No	~	Edm.String	~ [1
OrderCatego	ry .		*AUTYP - NUMC (2): Order	category	~						~		2	0	0			No	~	Edm.String	~ [-
OrderCurrenc	y.		*WAERS - CUKY (5) : Curren	су	~								5	0	0			No	~	Edm.String	~ [
OrderDescrip	tion		*KTEXT - CHAR (40): Descr	iption	~								40	0	0			No	~	Edm.String	~ []
OrderProcess	singContext		*MAINTORDERPROCESSING	CONTEXT - CH	~								0	0	0			No	~	Edm.String	~ [
OrderType			*AUART - CHAR (4) : Order	Туре	~						v		4	0	0			No	~	Edm.String	× [1
Phase			*MAINTORDOVRLPROCPHAS	SE - CHAR (2):	~								0	0	0			No	~	Edm.String	× [~
PlannerGroup	5		*INGPR - CHAR (3) : Planner	r Group	~								3	0	0			No	~	Edm.String		

- 7. Enter the label to be used on the mobile client for this property if necessary. If this value is empty, the default data item field label associated with the oMDO entity type structure component will be used.
- 8. Click the Visible in Detail Screen check box.
- 9. Save changes and select a customization request if necessary.
- 10. Synchronize from a mobile device.

11. The property will now appear on the detail screen of the corresponding object.

2.5 Optimized Delta Synchronization

The SAP Service and Asset Manager application performs two types of synchronization: initial synchronization and delta synchronization. Initial synchronization is performed either when the user logs in to the application for the first time or after the application is reset. Any subsequent synchronization performed after a successful initial synchronization and before the app is reset is a delta synchronization, which typically uploads any transactions created locally on the mobile device to the backend system and downloads delta from the backend to the mobile device for entities that have changed since the last synchronization.

As of SAP Service and Asset Manager version 2310, the application is activated for optimized delta synchronization by default. In this case, when the user initiates delta synchronization, an attempt is made to upload transactions, if any. An interactive call then identifies entities that need to be updated or have changed since the last synchronization. Only for these changed entities will delta synchronization be started, thus optimizing the duration of delta synchronization.

Qualifying entities for delta synchronization

Since the last synchronization completed, entities are qualified for delta synchronization as follows:

- 1. An entity that has a new dependent queue
- 2. An entity that has a triggered exchange
- 3. An entity whose configuration includes delta key calculation on every delta synchronization
- 4. An entity for which periodic update is enabled and expired
- 5. Entities that are marked as dependent for the above qualified entities from 1, 2, 3, and 4
- 6. Entities from 5 that are active by feature or persona for the respective user

Optimized delta synchronization will be equivalent to normal delta synchronization if:

- 1. The application cannot detect the completion time of the user's last synchronization
- 2. The application's DownloadEffectedEntities parameter is set to N (off)
- 3. The application initiated synchronization due to a user change, for example, user A logged out and user B logged in, which initiated synchronization

The mobile configuration parameter must be set as follows (available in SAP Service and Asset Manager 2310 version):

Parameter group: DELTA_SYNC

Parameter name: DownloadEffectedEntities

Param. Value: Y

obile Applica	ation Info						
lobile Application:	SAP_SERVI	CE_ASSET_MANAGER_:	Release: 23	10			
obile App. Desc.:	SAP Service	and Asset Manager 2310					
plication Pa	rameters						
arameter Lis	t						
Import/Expor	t∼					Sea	arch:
RecNo	Paramete	er Group	1	Param. Name	Param. Value	Scope	Dep
000000260	DELTA_S	YNC		DownloadEffectedEntities	Y	Appli	00000
Parameter Detail							
Parameter Detail							
Parameter I	Detail						
Para	meter Group:	DELTA_SYNC					
P	aram. Name:	DownloadEffectedEntities			Param. Scope	Applica	ation
F	Param. Value:	Y			Use Language Specific Value		
Rule	Id:				Use Rule:		
Dependent	Parameter Id:						
Dependent Para	meter Group:						
Dependent Para							
Dependent Para							
	Comment	Flag allows for client to look at modifi which entities to call in a delta sync.	ed entities entity set to det	ermine			
	Active Flag:	×					
No Run	time Change:						

() Note

To disable optimized delta synchronization, set the *DownloadEffectedEntities* parameter value to N and save it.

2.6 Shadow Table

As of the release of SSAM 2305, support for shadow table is now available. Any custom changes will be stored in separate sets of tables, unlike standard configuration tables that use the MAIF framework. Shadow table support is only available for oData applications. Any custom application created using the configuration panel will be marked as supporting shadow tables.

The Enable Shadow checkbox in the mobile application tables (/SYCLO/CA000 and /SYCLO/YCA000) is introduced to determine whether or not the application has enabled shadow table support:

Table /SYCLO/CA000 Display SAP

MANDT	910
MOBILE APP	SAP_SERVICE_ASSET_MANAGER_2305
TYPE	0
VERSION	2305
DESCRIPTION	SAP Service and Asset Manager 2305
AUTO CRT OFF	
SERVER REG OFF	
MULTI BACKEND	
SYSTEM ROLE	
FLAG BLOCKED	
EFFECTIVE TS	0
DISABLE EXOBJ	
ENABLE IBQ	
STD IBQ QUEUE ID	
ENABLE SHADOW	X
PERSONA RULE	
SYS INDEX	0

If the application is enabled in shadow table mode, all user configuration changes will be saved in the shadow tables.

The following configuration fields from the configuration panel can be supported by shadow tables:

- Mobile Application Configuration
- **Component Assignments** ٠
- **Geospatial Service Definitions** ٠
- oData Service Assignment
- oData Model Configuration •
- oData Mobile Data Object Configuration
- EFI Assignment ٠

V

- Exchange Object Configuration •
- Push Scenario Definition •
- Outbound Trigger Configuration
- Subscription Agent Definition ٠

General Info	oData Channel Integration Settings	Change Detection Settings	
Mobile Application Configuration	oData Service Assignment	EFI Assignment	
Defines basic information about mobile applications, such as release, description.	Assign standard oData Service to the mobile application. oData service model will be generated based on configuration setting.	Enhancement Framework Implementation Trigger is assigned to Exchange Objects.	
Component Assignments	oData Model Configuration	Exchange Object Configuration	
Define component assignment for user persona, features etc.	Mobile application oData Model definition for entity type, entity set, association, association set, navigation property etc	Change detection rules for SAP data objects such as master data transaction data can be defined for each mobile application.	
Geospatial Framework Settings	oData Mobile Data Object Configuration		
Geospatial Service Definitions	Data extraction and distribution logic and rules are defined for		
Define Geospatial Service Provider Information, Object Type Assignment etc.	configuration, master and transaction data.		
Transaction Management Setting	RFC Channel Integration Settings	Push Framework Settings	
Inbound Transaction Queue Definition	Mobile Data Object Configuration	Push Scenario Definition	
Define Inbound Transaction Queue Settings	Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Push scenarios can be defined to push data to mobile device when qualified datasets changed in the backend.	
Data Staging Settings	BAPI Wrapper Configuration	 Outbound Trigger Configuration 	
Data Agent Definition	Agentry Integration BAPI Wrappers are assigned to Mobile Data	Triggers to interface with external systems are defined.	
Define data store supplying agent settings.	Objects	Subscription Agent Definition	
Data Store Definition		Defines how subscription requests for backend system data are	
Define staging data store settings, data storage, data agent assignment, schedule, mapping information etc.		handled.	

A shadow table has the same name as a standard configuration table, with an extra Y in the table name. For example, the standard configuration table for an entity type is /MFND/C_OM001. The corresponding shadow table is /MFND/YC_OM001.

The shadow table has all the fields as in the standard configuration table, with an extra *DELETED* field used to indicate whether or not the standard configuration has been deleted. The configuration panel procedures combine the standard and custom configurations and return a consolidated result for display.

$\rightarrow 6\hat{j}$	² O	Ð	Te 7			2	ì	저	Technical Settings Append Structure
insparent Table	/MFN	D/YC	_0M001 Ac	tive					
ort Description	Data	a Mod	lel – Entity Typ	oe Setti	ngs – Custo	om Config			
Attributes Deliv	ery	and	Maintenance	e F	ields I	nput Help	/Check	Currer	cy/Quantity Fields Indexes
		\mathbf{i}	₩ Ľ	0	Srch H	lelp Pr	edefined	Туре	1 / 22
Field	Key	Initi,	Data elen	nent	Data Typ	be Length	Decim.	Coordinate	Short Description
MANDT	\checkmark	\checkmark	MANDT		CLNT	3	0	(Client
ENTITY_TYPE_ID	\checkmark	\checkmark	/MFND/CORE	ENTI.	CHAR	32	0	(oData Model – Entity Type Id
ENTITY_TYPE_NAME			/IWBEP/SBD	M_NOD.	CHAR	128	0	(Service Builder: Artifact Name
OMDO_ID			/MFND/CORE	_OMDO.	CHAR	40	0	(oData Mobile Data Object Id
TECH_ENTITY_TYPE			/MFND/CORE	TECH.	CHAR	40	0	(oMDO – Technical Entity Type
REF_STRUCT			/MFND/CORE	_ETY_	CHAR	30	0	(Technical Entity Type Reference Structure
MOBILE_APP			/SYCL0/COR	E_MOB.	CHAR	30	0	(Mobile Application Name
ODATA_SERVICE_ID			/MFND/CORE	ODAT.	CHAR	32	0	(Mobile application oData Service Id
ACTIVE			/SMFND/COR	E_CON.	CHAR	1	0	(Conditional Active
IS_MEDIA			/MFND/CORE	_0M_I.	CHAR	1	0	(oData Model – Media Indicator
BIND_CONVERSION			/MFND/CORE	_0M_B.	CHAR	1	0	(oData Model – Bind Conversion Exit Indicator
TAG_ID			/MFND/CORE	_TAG	CHAR	255	0	(Tag Id
FEATURE_ID			/SMFND/COR	E_APP.	CHAR	30	0	(Application Feature Id
.INCLUDE			/SYCL0/COR	E_TIM.	STRU	0	0	(Standard time stamp structure
.INCLUDE			/SYCLO/COR	E_CRT.	STRU	0	0	(Standard creation time stamp structure
CREATED_BY			/SYCLO/COR	E_CRE.	CHAR	12	0	(Created by
CREATED_TS			/SYCLO/COR	E_CRE.	DEC	15	0	(Creation timestamp
. INCLUDE			/SYCLO/COR	E_CHG.	STRU	0	0	(Standard change time stamp structure
CHANGED_BY			/SYCLO/COR	E_CHA.	CHAR	12	0	(Last Changed By
CHANGED_TS			/SYCL0/COR	E_CHA.	DEC	15	0	(Changed time stamp
.INCLUDE			/SYCL0/COR	E_CHA.	STRU	0	0	(Standard change indicator structure
DELETED			/SYCL0/COR	E_B00.	CHAR	1	0	(Boolean Type: 'X' == True '' == False

With shadow table support, customers can upgrade SSAM versions without affecting previously created custom configurations. The migration tool has been enhanced to support migration of shadow table data.

2.7 Removal of Dependent Objects Based on Lead Objects

SAP Service and Asset Manager downloads data to mobile by using distributon mode. One of the supported distributon modes is Dependency mode. When Dependency mode is activated for oMDO, objects get qualified by the lead object. With this new feature introduced, when the last lead object is removed from device, the associated dependent object will also be removed.

Feature Description

See the following example and explanation for this feature:

Example: *Workorder 450000001* references *technical object 100000010* and the required dependency configurations are active in the mobile applicaton configuration.

- When the *workorder 450000001* qualifies for the mobile device, the workorder oMDO generates dependency queue to equipment oMDO. When the equipment oMDO performs key calculation, it qualifies the *technical object 100000010* for download.
- With this feature, when the life cycle of *workorder 450000001* is completed from the mobile device and the object gets removed from it, the *technical object 100000010* (which was downloaded as dependent object to *workorder 450000001*) will also be removed.

O Note

If the same dependent object is referenced by more than one lead objects (e.g., workorder and notification), the dependent object will be removed **only when the last lead object life cycle is completed and removed from mobile device**.

Supported Objects

Removal of dependent objects based on lead object removal is supported **only** for the following objects using standard handlers:

PM Objects in SAP Service and Asset Manager	Handlers
Notification	/MERP/CL_PM_NOTIFICATION_OD
Functional Location	/MERP/CL_PM_FUNCLOC_OD
Equipment	/MERP/CL_PM_EQUIPMENT_OD
Measuring Point	/MERP/CL_PM_MEASURING_POINT_OD
Measurement Document	/MERP/CL_PM_MEASUREMENT_DOC_OD

Standard Support for SAP Service and Asset Manager 2310

From SAP Service and Asset Manager 2310, all configurations required for this feature are available as standard, with the following exception:

 If the LITE version of oMDO is used for Equipment and/or Functional Location, the removal of dependent feature is deactivated. To switch it manually, refer to Support for LITE Version of Technical Objects [page 79].

If you want to use this feature on SAP Service and Asset Manager versions released **before 2310**, please consider the following:

- In addition to the existing standard configuration (and other notes it there are any), you must apply the following manual configuration changes:
 - 1. For configuration steps, see Section 3 (*High-Level Steps to Enable Support for SAP Service and Asset Manager 2305 or lower*) of the attached document in 3378889 SAP note.
 - 2. After the configuration changes are done, reset the application.

Design and Limitations

Please consider the following information and limitations regarding the feature:

- Any changes to the configuration and/or offline files require a reset and initial sync of the application.
- If entries in the user dependent list are modified or deleted manually, or other than the standard oMDO is used, the feature may not work as intended.
- This feature keeps track of objects that are downloaded **only via dependency queue**. If the same object has qualified via another distribution mode, this feature will not work.
- Changes of referenced dependent objects after the lead object was downloaded to the mobile device are treated as a new dependent object for the lead object.

O Note

For example, the lead object references to dependent object "A" and it has already been downloaded to the mobile device. Then in the back end if the referenced dependent object is changed from "A" to "B", the delta sync will refresh the lead object with the newly referenced dependent object "B". However, the removal of dependent object "A" happens only on reset of mobile application. The removal of dependent object "B" happens when the lead object is removed from device.

- If the implementation involves client state keys and/or origin dependent keys format change (either through code and/or configuration), this feature may not work.
- Unless explicitly stated, no other objects support the dependency removal without a reset of the mobile application.
- With 2310, LITE version of oMDO is introduced for Equipment and Functional Location objects. While the regular oMDO for Equipment and Functional Location downloads the full-blown data for each qualified object that is associated with workorder or notification, the LITE version downloads only the minimum details of technical object (i.e., without any dependencies like documents, classification, characteristics, measuring points, measurement documents etc.).
 - As a result, when the LITE version of oMDO is active for Equipment and/or Functional Location as standard configuration for the mobile application or enabled via manual configuration, the removal of dependent object for Equipment and Functional Location will be deactivated.
 - If this feature was manually enabled for lower versions of SAP Service and Asset Manager and you want to deactivate it, refer to the 3368555 scale SAP note.

• If you want to activate the removal of dependent object for Equipment and/or Functional Location, because the LITE version is not used in implementation, refer to Support for LITE Version of Technical Objects [page 79] to activate it.

2.8 Support for LITE Version of Technical Objects

From SAP Service and Asset Manager 2310, LITE version of technical objects is activated as standard configuration (i.e., LITE version of oMDO exists as standard for Equipment and Functional Location objects). As a result, technical objects associated with work orders or notifications are downloaded with full-blown data and others have only minimum data (LITE version). When new jobs qualify with LITE version of technical object, the application automatically downloads the full-blown data for the respective technical object along with the workorder or notification download.

Context

If the LITE version of technical objects is not preferred for the implementation (i.e., implementation prefers full-blown data for all technical objects downloaded to the device), perform the following steps to switch:

(i) Note

Switching from LITE version to full-blown version is relevant only for 2310 version.

Procedure

- 1. Disable additional oMDO assignment settings for the following oModels:
 - MyEquipment
 - MyEquipLongText
 - MyFunctionalLocation
 - MyFuncLocLongText
- 2. Enable oMDO data distribution filters for the following oMDOs:
 - SAM2310_EQUIPMENT

* oMDO Id: SAM2310_EQUIPMENT	*Description: Equipment
* Mobile Application: SAP Service and Asset M	
* oMDO Handler: /MERP/CL_PM_EQUIPM	
Mildo Hallola/MERFICE_FM_ECOFM	
Setting Technical Model Info Data Filter	Field Selection Change Delection Dependent Object Transaction Settings Outbound Trigger Assignment
ilters	Rule Editor
ation - CREATE	
ation - READ	Operation: READ Filter Name: OBJECT_DISTRIBUTION_MODE
ta Distribution	Object Name: /MERP/CORE_OMDO_DISTR_STR Reference Field Name: GEN_ASGMNT_TYPE
BJECT_DISTRIBUTION_MODE*	Data Filter Rule Key: SAM2310_EQUIPMENT.READ.OBJECT_DISTRIBUTION_MODE
ta Segment	
andard Filter	Filter Rule Type: Static Value in Range Table Format
solete Filter	Enter Range Value
	Sign: Inclusive V Option: =
	Low Value: 1 - OMDO Filter
	High Value:
	Active Flag: Active Flag and save
	Rule List
	Rule No. Rule Type Rule Value Active Flag
	00001 RANGE 1
	00002 RANGE 2
* oMDO Id: SAM2310_FUNCLOC * Mobile Application: SAP Service and Asset M * oMDO Handler: //MERP/CL_PM_FUNCLO	
Setting Technical Model Info Data Filter	Field Selection Change Detection Dependent Object Transaction Settings Outbound Trigger Assignment
Filters	Rule Editor
ration - CREATE	
iration - READ	Operation: READ Filter Name: OBJECT_DISTRIBUTION_MODE
ata Distribution	Object Name: //MERP/CORE_OMDO_DISTR_STR Reference Field Name: GEN_ASGMNT_TYPE
OBJECT_DISTRIBUTION_MODE* ata Segment	Data Filter Rule Key: SAM2310_FUNCLOC.READ.OBJECT_DISTRIBUTION_MODE
andard Filter	Filter Rule Type: Static Value in Range Table Format
bsolete Filter	
	Enter Range Value
	Sign: Inclusive V Option: =
	Low Value: 1 - OMDO Filter
	High Value:
	Active Flag: Enable the Active Flag and save
	Rule List
	Rule No. Rule Type Rule Value Active Fl. g
	00001 RANGE 1
	00001 RANGE 1

3. Disable the additional oMDO assignment for the *MyEquipment* entity type and click *Save*.

•

nlity Type Name:	MyEquipment		Entity Type Id.	42010AEECE	531EDDBCE2	907226A504					
obile Application:	SAP_SERVIC	E_ASSET_MANAGER_2310	SAP Service and Asset Manager 2310								
	42010AEECB531EDDBCE2905306772		Tech. Service Name:	/MERP/SAP_	SRV_ASSET_I	MANAGER_231	Ve	rsion: 0001			
	SAM2310_EC	UIPMENT : Equipment					* oMDO Entity	Type: EQUIPM	ENT : /MERP	RP/PM_EQUIP_ENTITY_	
	Yes		App. Feature Id:								
EntitySet	Property List	Association & Set List	Navigation Property List	Additional	Setting of	MDO Assignment					
oMDO Id			oMDO Entity Type								
dditional oM	DO Assign	ment List									
	QUIPMENT_LI	ΓE.	EQUIPMENT					Allow Update Su	bstitution (Disabled	
	QUIPMENT_LI	E					Aggregation		Ibstitution		
	QUIPMENT_LI	E							Ibstitution		
	QUIPMENT_LIT	E							Ibstitution		
	QUIPMENT_LI	E							Ibstitution		
	-	E							bstitution		
SAM2310_E	Detail	IE.	EQUIPMENT						bstitution		
SAM2310_E4	Detail		EQUIPMENT E : Equipment Lite						Ibstitution		

4. Repeat the previous step for all the entity types mentioned in Step 1 [page 79].

③ Note

If a similar configuration is enabled for other application versions, perform this step for those entity types as well.

5. In the respective mobile application parameter configuration, deactivate the following parameters:

Appl	ication Para	meters				
Para	ameter List					
x	Import/Export ~					Search
	RecNo	Parameter Group	Ŧ	Param. Name	Param. Value	P
	000000258	DEPENDENCY_LIST		SkipTombstone	/MERP/CL_PM_EQUIPME	NT_OD
	000000259	DEPENDENCY_LIST		SkipTombstone	/MERP/CL_PM_FUNCLOC	_OD

• Deactivate the following parameter by unticking the *Active Flag* checkbox and save the changes. Repeat this step for all parameter values shown above.

Parameter Detail		
Parameter Detail		
Parameter Group:	DEPENDENCY_LIST	
Param. Name:	SkipTombstone	
Param. Value:	/MERP/CL_PM_EQUIPMENT_OD	
Rule Id:		Use Rule:
Dependent Parameter Id:		
Dependent Parameter Group:		
Dependent Parameter Name:		
Dependent Parameter Value:		
Comment:	Data object shared by multiple oMDOs. Exempt from tombstone.	
Active Flag: No Runtime Change:	✓ Deactivate the Active Flag and save	

- 6. When all changes are done, reset the mobile application and perform an initial sync.
- 7. Before productive migration, verify that all required data is downloaded and relevant functonalities work as intended.

3 Mobile Add-On Configuration Panel Common Procedures

3.1 Configuring Personas and Features Overview

Persona and feature assignments determine the data downloaded to the mobile client application.

The entity types below are introduced in SAP Service and Asset Manager to return persona- and featurerelated configurations to the mobile client. The client logic looks at these entity types to check user personas assignment or assignments and to see if features are enabled. This is used in the mobile client application to determine which user interface elements should appear on certain screens and sections.

- UserFeature: In the /MERP/SAP_ONLINE_LOOKUP_EXT_XXXX service, this entity returns a list of features that are applicable based on user personas. With the support of UserFeature, enable parameters are no longer defined in AppParameters.
- UserPersonas: In the MERP/SAP_ONLINE_LOOKUP_EXT_XXXX service and /MERP/ SAP_SRV_ASSET_MANAGER_XXXX service, this entity returns user persona assignment.
- UserSyncGroupDetails: In the /MERP/SAP_ONLINE_LOOKUP_EXT_XXXX service, this entity returns list of entity sets that are applicable based on user personas.

Previously, the application would download all data regardless of enabled or disabled features. This isn't optimal and can impact the performance of initial and delta syncs. Now, during the initial sync, the mobile client makes an online call to fetch the logged on user's persona assignment and entities needed to request in subsequent calls. The only data downloaded is data needed for the persona:

Stat	Service Call Info	Method	Proc. Time	Appl. Time	Non-GW T	Req. Size	Resp. Size	Form
	/MERP/SAP_ASSET_MANAGER_2110/\$batch	POST	4,739	2,040	0	4,910	37,213,4	mixe
	/MERP/SAP_ASSET_MANAGER_2110/\$batch	POST	795	390	0	1,629	5,009,567	mixe
	/MERP/SAP_ASSET_MANAGER_2110/\$batch	POST	4,659	2,471	0	6,469	27,056,0	mix
	/MERP/SAP_ASSET_MANAGER_2110/\$batch	POST	1,980	961	0	16,681	4,332,311	mix
	/MERP/SAP_ASSET_MANAGER_2110/OpenSyncSession?SAPProd	POST	66	34	0	0	520	json
	/MERP/SAP_ASSET_MANAGER_2110/\$metadata?sap-language=	GET	290	2	0	0	1,045,062	xml
- (/MERP/SAP_ONLINE_LOOKUP_EXT_2110/UserSyncGroupDetails	GET	80	38	0	0	246,904	xml
• (/MERP/SAP_ONLINE_LOOKUP_EXT_2110/UserPersonas	GET	61	40	0	0	1,517	xml
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/\$metadata	GET	14	2	0	0	0	
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/	GET	16	2	0	0	5,766	xml
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/\$metadata	GET	27	1	0	0	48,669	xml
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/	GET	27	2	0	0	5,766	xml
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/\$metadata	GET	30	2	0	0	48,669	xml
	/MERP/SAP_ONLINE_LOOKUP_EXT_2110/	GET	18	2	0	0	5,766	xml

Use the following topics to configure your personas and features in your mobile application:

- Configuring Personas [page 87]
- Configuring Features [page 90]
- Configuring Component Assignments [page 97]

3.1.1 Supported Features for SAP Service and Asset Manager for Windows

SAP Service and Asset Manager for Windows allows a single user to be assigned the Maintenance Technician Persona role. The table below shows the main functions of the persona.

(i) Note

For more information concerning features supported when using SAP Service and Asset Manager for Windows, refer to the note https://launchpad.support.sap.com/#/notes/3268538

	Feature De-		Maintenance Tech Persona
Feature	scription	Applicable	Default Enabled
CA_AT- TACH- MENT	Attachment support for business ob- jects (DMS / BDS / GOS)	~	Y
CA_BUSI- NESS_PAR TNER	Business partner	~	Ν
CA_CLAS- SIFICA- TION	Classifica- tion and characteris- tics for tech- nical objects	~	Y
CA_CORE_ DATA	Core data in- cluding org structure (ex: Plant, Work Center)	~	Y
CA_CRE- ATE_TECH _OBJECT	Create equipment and func- tional loca- tion	~	Y
CA_NO_HI STORY	Notification history	~	Y
CA_TECH_ OBJECT	Equipment and func- tional loca- tion master data	~	Y
CA_WO_HI STORY	Work order history	~	Y
CS_NOTI- FICATION	Service noti- fications	0	

	Feature De-		Maintenance Tech Persona
Feature	scription	Applicable	Default Enabled
CS_SERV- ICE_OR- DER	Service or- ders	0	
HR_TIME- SHEET	CATS time- sheet	~	Ν
IAM_INDI- CATORS	PdMS indica- tors	~	Ν
PM_CLOC K_IN_CLO CK_OUT	Clock In / Clock Out	~	Ν
PM_CON- FIRMA- TION	PM confir- mations for time record- ing	~	Y
PM_LIN- EAR_AS- SET_MAN- AGEMENT	Linear Asset Management (LAM)	~	Ν
PM_MEAS UREMENT	Measure- ment read- ings	✓	Y
PM_NOTI- FICATION	PM notifica- tions	~	Y
PM_OB- JECT_LIST	Object lists on work or- ders	✓	Y
PM_PRT	Production, Resources, and Tools (PRT)	~	Y
PM_SU- PERVI- SOR_MOD E	Supervisor mode	~	Y
PM_WORK _ORDER	PM work or- ders	~	Y

3.1.2 Usage Types

Each persona is categorized by type of usage, either *Professional* or *Standard*. This determines the Full Use Equivalent (FUE) valuation according to the updated licensing model for SAP Service and Asset Manager.

Professional type of usage is one (1) FUE and Standard is one-half (1/2) FUE. In the base configuration, Maintenance Technician is defined as a professional user, and Field Service Technician and Inventory Clerk are

defined as standard users. Customers can also define themselves as custom personas, which is considered a professional usage type.

③ Note

The usage type does not necessarily depend on the persona, but rather on the available feature sets. For example, a single FUE is the maximum value for any individual user that allows access to all available features, which means that the professional usage type is configured with more feature support than the standard usage type.

The key difference is when a customer uses a standard Mobile Application Integration Framework (MAIF) app, such as SAP Service and Asset Manager, and only needs inventory or field service functionality. In this case, one (1) FUE could cover two users since those personas are standard with only one-half (1/2) FUE value.

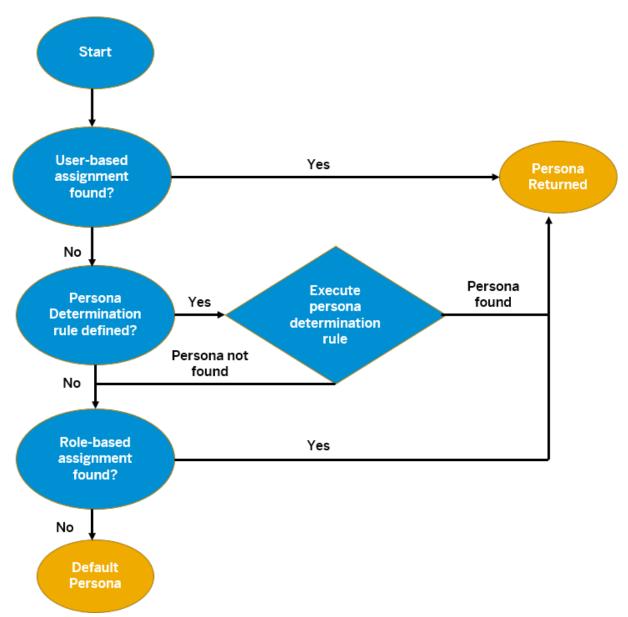
Application Type	Persona Type	Usage Type	Changeability
MAIF application	Maintenance Technician	Professional	No change allowed in cus-
	Field Service Technician	Standard	tomer system
	Inventory Clerk	Standard	Changes allowed in SAP de- velopment system only
	Custom	Professional	Change allowed in customer system.
			Custom persona can be cre- ated in customer namespace only.
Partner-defined MAIF appli-	Persona I	Professional	Can only be changed in part-
cation	Persona II	Standard	ner development system
	Persona III	Standard	
	Custom	Professional	Change allowed in customer system.
			Custom persona can be cre- ated in customer namespace only.
Custom-defined MAIF appli- cation	Custom	Professional	Change allowed in customer system.
			Custom persona can be cre- ated in customer namespace only.

The table below shows what type of usage can be configured for different types of application.

3.1.3 Configuring Personas

SAP Service and Asset Manager allows a single user to be assigned multiple personas, and she may switch between them in the *Profile Settings* screen of the mobile application.

Context



The default persona determination rule, /SYCLO/CL_CORE_PERSONA_RULE

The system determines persona based on the following logic and sequence.

Procedure

- 1. Choose one of the following ways to assign a persona to a mobile user:
 - a. User-based assignment: Navigate to System Administration & Monitoring Portal Administration
 > User Management .

Users may be assigned to one or more personas in the *Admin Portal*, launched in SAP GUI with tcode /n/syclo/admin.

This is first considered to determine a user's persona. If a persona is assigned here, you will not need to do further checks.

System Administratio	n & Monitoring Portal		
Welcome Aaron Schuett System - C	0M7(910) Today - 25.05.2022		Log Off
Overview Administration Monitoring	Statistics		👔 Hide Navigation Panel
User Management	Middleware User Management		
 Server Management Runtime Logging Level Setting 	Search Mobile Users		
Mobile Application Parameters	✓ Basic Search Parameters		
	* Mobile Application: SAP Service and Asset Manu Last Activity Time: All	ger 2205 VUser: DEMOUSER	Q. Search
	Search Result		
	View: [Standard View]	0	
	User Id Mobile App	Server Serial No Lock Flag Created On	Create
	DEMOUSER SAP_SERVICE_ASSET_MANAGER	2205 SCPMS 25.01.2022 20:08:34	Distribute
	Mobile User Detail (Display Mode)		
	Change		
	Basic Info User Attributes Preference	Info Cross Reference List Client Registration Info Persona Assignment	nent
	Persona List		
	User Persona	Active	
	FIELD_SERVICE_TECHNICIAN	V	
	INVENTORY_CLERK		
	MAINTENANCE_TECHNICIAN	\checkmark	

See the following topics and subtopics for detailed information, depending on your back end system:

- Enabling Mobile-Specific Authorization Checks Mobile Add-On for SAP S/4HANA Security Guide topic and subtopics in the .
- Topic and subtopics in the Enabling Mobile-Specific Authorization Checks topic and subtopics in the *Mobile Add-On for ERP Security Guide*.
- b. **Role-based assignment:** Each persona is associated with a pre-defined authorization object in SAP Service and Asset Manager. Customers may assign the pre-defined authorization objects to users as needed. The authorization objects are then used to determine the user persona.

These are typically assigned to a role in SAP GUI via t-code PFCG. By default, three standard authorization objects are delivered:

Persona	Authorization Object
Maintenance Technician	/MERP/SMT

Persona	Authorization Object
Safety Technician	/MERP/WCM
Field Service Technician	/MERP/FST
Inventory Clerk	/MERP/SIC

Customers need to create custom role or roles and assigned authorization objects accordingly based on own business and security needs.

Authorizations Edit Goto Utilities Environme	ent System H	lelp			
✓	× ⊕ Q	Q [†]	0066 5 0		
Ser Change Role: Authorization					
🚱 前 🕀 Selection criteria 🕀 Manually	Organizational	levels	Trace 🚺 Information	Versions	
Role ZSAM_FIELD_SERVICE_TECHNICIAN Maint. 0 unmaint. org. levels, 0 open fields Data Status Saved Profile Status generated				••••	
■ Status Edit > 📰 😻 ጵ 🗇 🕫 > Group/Object/Authorization/Field	Maintenance			Text	
Vt Oce Object Class PM	Manual			Plant Maintenance	
Vta one Authorization Object /MERP/FST	Manual	1		SSAM: Field Service Technician Persona Assignment	
VI COL Authorization 00	Manual	1		SSAM: Field Service Technician Persona Assignment	
• ACTVT	Manual	0	Execute	Activity	

c. **Default persona assignment:** If none of the above options are found, the system will use the preconfigured default persona. The default persona is the *Maintenance Technician* in the standard delivery.

Customers can update the default persona based on own business needs by selecting the default checkbox in the *Configuration Panel*.

Welcome Aaron Schuett System - To	oday - 25.05.2022						Log C
ConfigPanel Home							
efined Mobile Applications	 Mobile Application (Display Mode) 						
SAP_SERVICE_ASSET_MANAGER_2205	Create 🕼 Copy 🗊 Delete 🖉 Chang	ge					
	Application Persona Features Syn	nc Groups					
	Mobile Application Info						
	Mobile Application: SAP_SERVICE_ASSE	T_MANAGE	elease:	2205			
	Mobile App. Desc.: SAP Service and Asse	et Manager 2205					
	Application Personas						
	Auto Determi	ination Rule:					
	Persona List						
	Persona List Persona Name	Usage Type	Active	Default	Authorization Type	Check Object	
		Usage Type Standard	Active	Default	Authorization Type Authorization O		
	Persona Name			Default		/MERP/FST	
	Persona Name FIELD_SERVICE_TECHNICIAN	Standard	v	Default	Authorization O	/MERP/FST /MERP/SIC	
	Persona Name FIELD_SERVICE_TECHNICIAN	Standard	 		Authorization O	/MERP/FST /MERP/SIC	

2. Implement your own custom rule, if desired. Select your custom rule in the Auto Determination Rule field.

3.1.4 Configuring Features

Customers can disable a feature if it is not relevant in their business scenarios, regardless of the personas used. Customers can also create features, not just enable or disable standard features.

Context

A new feature created by a customer can only be created in the customer namespace.

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

Procedure

- 1. Choose one of the following ways to proceed:
 - a. Application level: Navigate to Configuration Panel Mobile Application Configuration hyperlink
 Select Mobile Application (SAP_SERVICE_ASSET_MANAGER_<version>) Features tab from the home page.

The list of features delivered in SAP Service and Asset Manager is displayed in the *Configuration Panel*. You may define new features in a customer namespace only.

Each feature has an *Active* check mark that you can toggle. This acts as the master switch across the application.

Welcome Aaron Schuett System · To	ay - 25.05.2022	Log
ConfigPanel Home		
efined Mobile Applications	 Mobile Application (Display Mode) 	
SAP_SERVICE_ASSET_MANAGER_2205	Create Copy Delete Change	
	Application Persona Features Sync Groups	
	Mobile Application Info	
	Mobile Application: SAP_SERVICE_ASSET_MANAGE Release: 2205	
	Mobile App. Desc.: SAP Service and Asset Manager 2205	
	Switchable Features	
	Feature List	
	App. Feature Id Active Feature Desc. IAM_CHECKLIST This feature allows user to access ASPM checklists	
	□ IAM_INDICATORS	i
	ISU_METER_MAN This feature enables ISU meter management data	
	MM_GOODS_ISSUE	
	MM_GOODS_REC 🗹 This feature allows user to perform goods receipt	

Note that enabling feature above does not check if system is qualified for the feature or not. If your system does not support ISU Meter Management, but you enable the ISU_METER_MANAGEMENT feature in the feature list, you could run into issues.

b. Persona level: Navigate to Configuration Panel Component Assignments hyperlink Select
 Mobile Application (SAP_SERVICE_ASSET_MANAGER_<version>) User Personas tab from the home page.

You can also toggle features related to a persona. Each persona is configured with a list of features supported in the standard delivery of SAP Service and Asset Manager.

You can view a list of features by persona in the *Configuration Panel*. Each feature has an *In-Scope* checkbox, meaning that the feature is allowed for that persona. In-scope features are not editable in customer or QA environments. Only In-Scope items can be enabled or disabled using the *Active Flag* checkbox.

lcome Aaron S	chuett System - Today - 25.05.2022			Lo
nfigPanel Hon	e Mobile Application Filter: *	×		
plication Ass	ignment Definitions			
Change 🔶	Application Search			
	tion: SAP_SERVICE_ASSET_MANAGER_2205 Mobile App. Type: oD	ata Application Release: 2205		
Mobile App. I	Desc.: SAP Service and Asset Manager 2205			
User Person	as oMDO Assignment xChange Object Assignment Push Scen	ario Assignment		
	-			
 Apply Fi 	lters			
	User Persona: FIELD_SERVICE_TECHNICI V	App. Feature Id:	~	
Feature Assi	gnment			
Feature Assi				
		App. Feature Id	In-Scope	Active Flag
Display Optio	User Persona			
Display Optio	User Persona FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER	 Image: A start of the start of	 Image: Construction
Display Optic	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION	V V	 Image: Constraint of the second second
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Display Optic	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE	× × × ×	
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Display Optio	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION		
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Display Optic	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE MM_VENICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION		
Display Optic	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION CA_CLASSIFICATION CA_CREATE_TECH_OBJECT		S
Display Optic	User Persona FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAA_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION CA_CREATE_TECH_OBJECT CA_CREATE_TECH_OBJECT	V V V V V V V	<pre></pre>
Display Optic	User Persona	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION CA_CREATE_TECH_OBJECT CA_CREW_MANAGEMENT CA_DIGITAL_SIGNATURE	V V	 <
	User Persona User Persona FIELD_SERVICE_TECHNICIAN	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICLA_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION CA_CREATE_TECH_OBJECT CA_DIGITAL_SIGNATURE CA_DIGITAL_SIGNATURE CA_GIS_ADD_EDIT		<pre></pre>
Display Optic	User Persona	CS_SERVICE_ORDER FSM_SCHED_INTEGRATION MM_MATERIAL_DATA MM_STOCK_LOOKUP MM_TECHNICIAN_GOODS_ISSUE MM_VEHICLE_STOCK PM_CONFIRMATION CA_BILL_OF_MATERIAL CA_CLASSIFICATION CA_CREATE_TECH_OBJECT CA_CREW_MANAGEMENT CA_DIGITAL_SIGNATURE	V V	 <

You can enable a feature for one persona, but disable the same feature for another persona. The list can be filtered using the *User Persona* or *Application Feature* Id drop-down list to find entries directly.

Note that if the feature is disabled at the application-main switch level, the feature is still considered disabled, regardless of the *Active Flag* status at the persona level.

- 2. Click the *Change* button. Enable or disable desired features.
- 3. *Save* your changes.

Results

Enabled features display in the Component Assignment Switchable Features tab.

3.1.4.1 Performance Calibration

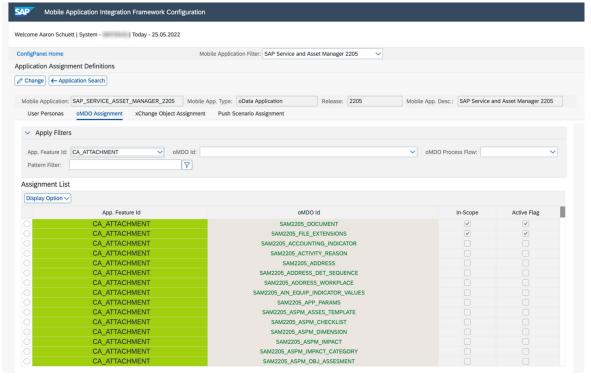
During mobile client synchronization, all active data objects are sent to the mobile user. For example, if data is being sent to the mobile user that the client application does not need, this can increase the synchronization time.

Disable the data objects that are not used in your workflow. Below are several ways to accomplish this.

 oMDO Assignment: Navigate to Configuration Panel Component Assignments hyperlink Select Mobile Application (SAP_SERVICE_ASSET_MANAGER_2205) oMDO Assignment tab .

Each feature is associated with one or more oData Mobile Data Object (oMDO) which provides business logic for a business object used in the mobile application and is mapped to OData requests for a business object on the backend.

You can view an oMDO list in the *Configuration Panel* and choose which entities are required and disable the others to avoid requesting unnecessary data during the mobile sync.



Like feature assignments, the *In-Scope* check mark indicates the data objects that are supported for each feature. Only In-Scope items can be enabled/disabled using the *Active Flag* check mark, and In-scope features are not editable in customer or QA systems.

Exchange Object Assignment: Navigate to Configuration Panel Component Assignments hyperlink
 Select Mobile Application (SAP_SERVICE_ASSET_MANAGER_2205) XChange Object Assignment tab
 Features can also be associated with an exchange object that combines technical objects, such as the exchange class handler, the exchange table and the lock object, with configuration rules.
 You can view the list of exchange objects in the Configuration Panel and select the ones you need and disable the others.

SAP Mol	bile Application Integration Framework Configuration			
Welcome Aaron	Schuett System - QM7(910) Today - 03.06.2022			Log Off
	Mobile Application Filter: *			
Application As	signment Definitions			
				Save X Cancel
				(a) Save
Mobile Applic	ation: SAP_SERVICE_ASSET_MANAGER_2205 Mobile App	Type: oData Application Release: 2205		
Mobile App	Desc.: SAP Service and Asset Manager 2205			
User Perso		Push Councils Assistment		
User Perso	nas oMDO Assignment xChange Object Assignment	Push Scenario Assignment		
V Apply	Filters			
App. Featu	re ld: V Exchange Object		~	
Pattern Filt	er: 🛛 🖓			
Assignmen	t List			
All In-Scope	B B De-Scope All B Enable All B Disable All Show O	IV In-Scope		
<u> </u>	App. Feature Id	Exchange Object	In-Scope	Active Flag
0	CA ATTACHMENT	SAM2205 BDS DOCUMENT	v	 Image: A second s
Õ	CA ATTACHMENT	SAM2205_DMS_DOCUMENT	 Image: Construction of the second seco	
Õ	CA ATTACHMENT	SAM2205_DMS_DOCUMENT_LINKS	 Image: A start of the start of	 Image: A set of the set of the
0	CA BUSINESS PARTNER	SAM2205_BUSINESS_PARTNER	 Image: A start of the start of	
0	CA_BUSINESS_PARTNER	SAM2205_CUSTOMER	 Image: A start of the start of	
0	CA BUSINESS PARTNER	SAM2205_VENDOR	 Image: A set of the set of the	
	CA_CLASSIFICATION	SAM2205_CLASS	 Image: A start of the start of	
O	CA CREATE TECH OBJECT	SAM2205_EQUIPMENT	 Image: A start of the start of	 Image: A start of the start of
0	CA_CREATE_TECH_OBJECT	SAM2205_FUNC_LOCATION		
0	CA_CREATE_TECH_OBJECT	SAM2205_OBJ_CHAR_VALUE	 Image: A start of the start of	 Image: A state of the state of
0	CA_CREATE_TECH_OBJECT	SAM2205_OBJ_CLASS_ALLOCATION	 Image: A start of the start of	 Image: A start of the start of
Õ	CA_TECH_OBJECT	SAM2205_EQUIPMENT	 Image: Control of the second se	
Õ	CA_TECH_OBJECT	SAM2205_FUNC_LOCATION	 Image: A start of the start of	
Õ	CA TECH OBJECT	SAM2205_OBJ_CHAR_VALUE		

You can also modify the active objects individually using the exchange object configuration. In this case, navigate to Configuration Panel Exchange Object Configuration hyperlink Mobile Application Filter (SAP_SERVICE_ASSET_MANAGER_2205) Exchange Object By Application Area Technical Settings tab

Mok	ile Application Filter: SAP Service	and Asset Manage	2205		
xchange Object De	tail (Change Mode)				
					Save X Cancel
Technical Settings	Change Detection Field Selection	h Change Detec	tion Condition Filter Di	ata Segment Settings Linkage Settings Push Settings	
* Exchange Object:	SAM2205_BUSINESS_PARTNER		* Eych Object Desc :	Business Partner Exchange	
	SAP Service and Asset Manager		Excit. Object DeSC.:	seemen carater ryonange	
* Application Area:	-	~			
eference Business Obj					
xchange Table Name:			Exch. Table Desc.:	Exchange Table - Business Partner	
xchange Lock Object:		N	o Exchange Table Update:		
Days To Keep History:	180				
Handler Setting					
ExchObject Handler:	/MERP/CL_CORE_BUPA_EX	-			
Collective Run Set	tings				
Collective Run Mode:	Dynamic 🗸				
Activation Setting					
Activation Setting					
	Active Flag: 🗸 Activation con	ntrolled by Application	on Feature		
Use In Linkage Pro	cessing Only: 🗌				

If the exchange object is assigned to a feature, the check mark *Activation controlled by Application Feature* will appear next to the *Active* check mark.

O Note

This control is like a master switch; if activation is disabled here, it will be disabled in all places, regardless of the active flags set in the previously discussed methods. However, it is also important to note that if an object is active here but disabled by the other methods, the linked exchange will not be executed when changes are made to the object. This prevents unnecessary exchanges from being triggered if the feature is not applicable to customers.

3.1.4.1.1 Activation by Feature

There are several entities in the Configuration Panel where it is possible to support activation by feature. This allows you to go down the hierarchy to manage entities, dependency objects, and more.

• **oData Model Entity Type:** You can specify a particular entity to be enabled only if the assigned feature is activated. In the example below, the EAMChecklistLink entity set is applicable to the Enterprise Asset Management (EAM) checklist functionality. Here only when EAM_CHECKLIST feature is enabled, EAMChecklistLink is available for the client.

	Mobile Application Filter: SAP Service and Asse	t Manager 2205							
obile Application	oData Model Detail (Edit Mode)								
								🖫 Save 🗙 Car	ncel [[
Entity Type Name:	EAMChecklistLink	Entity Type Id:	FA163EC95EE01EE	C97A05DB8841					
Mobile Application:	SAP_SERVICE_ASSET_MANAGER_2205 : SAP	Service and Asset M	anager 2205						
* oData Service Id:	FA163EC95EE01EEC97A05DB88413F	Service:	/MERP/SAP_SRV_A	SSET_MANAGER_2	. Version:	0001			
* oMDO Id:	SAM2205_INSPECTION_LOT : Inspection Lot			~	* oMDO Entity Type:	CHECKLIS	T_LINK : /MERP/PM_CH	ECKLIST_LINK_STR	
Active:	By Feature	App. Feature Id:	EAM_CHECKLIST	~					
* Entityset Name: [Creatable: [EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: [EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: Creatable:	EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: Creatable:	EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: [] Creatable: [EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: [Creatable: [EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: Creatable:	EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					
* Entityset Name: Creatable:	EAMChecklistLinks Updatable: Deletable:	ion Property List	Additional Setting	oMDO Assignment					

• Association and navigation: Like an entity type, association and navigation can be assigned to a feature. Only when the assigned feature is enabled does the association become visible to the mobile client. If the disabled flag is active, the entity will not be visible to the mobile client regardless of whether the feature is enabled or not.

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• **Dependency Object:** If activation by feature is configured in a dependent object, and if the assigned feature is not enabled, dependency objects will not be generated in the dependency queue.

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	Mobile Application Filter: SAP Serv	vice and Asset Manager 22	205			
a Mobile D	ata Object Detail (Change Mode)					
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	* oMDO Id: SAM2205_WORK_ORDE	ER_GENERIC	* Description: Work Ord	er		
* Mobile	Application: SAP Service and Asset M	fanager 2205				
* oM	IDO Handler: /MERP/CL_PM_WORKO	RDER_OD : V				
General Setti	ng Technical Model Info Data F	Filter Field Selection	Change Detection Dependent Object	Transaction Settings	Outbound Trigger Assignment	
			Expiration Time (Seconds):	1.800		
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Add Depe	endent Object	Object				
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0						
	WOHEADER		SAM2205_DIGITAL_SIGNATURE_LINK		DIGITAL_SIGNATURE_LINK	Yes
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bject Detail	WOHEADER WOHEADER WOHEADER WOHEADER		SAM2205_DIGITAL_SIGNATURE_LINK SAM2205_DISCONNECTION_DOCUMENT SAM2205_DOCUMENT SAM2205_EQUIPMENT		DIGITAL_SIGNATURE_LINK DISCONNACTIVITY ABSDOCUMENT EQUIPMENT	Yes By Fe Yes Yes
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• **EFI configuration:** An Enhancement Framework Implementation (EFI) event handler can be assigned to a feature with active flag set to *By Feature*.

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/MERP/CL_PM_EAML_EFI_EV	T SAP_SERVICE_ASSET_MANAGER_2205	SAM2205_LAM_OBJECT_DATA	LAM Object Data Exchange	By Feature		
Assignment Detail						
* Mobile Application:	SAP Service and Asset Manager 2205					
* Exchange Object:	SAM2205_LAM_OBJECT_DATA - LA V					
Exch. Object Desc.:	LAM Object Data Exchange					
ExchObject Handler:	/MERP/CL_PM_EAML_EX_HNDLR					
Active Flag:	By Feature 🗸 🗸		App. Feature Id: PM_LINE	AR_ASSET_MANAG 🗸		
Use In Linkage Processing Only:						

③ Note

We only support one feature assignment per object (such as entity type, association, navigation, EFI). You cannot assign multiple features to an object in the Configuration Panel.

3.1.5 Configuring Component Assignments

The Component Assignment page allows you to define what features are applicable for each persona.

Context

Using the *User Personas* tab, you can enable or disable features as desired. For example, *PM_CONFIRMATION* is enabled by default, and *HR_TIMESHEET* is disabled. If your site uses CATS, you can disable PM_CONFIRMATION and enable HR_TIMESHEET.

The *Switchable Features* tab allows you to configure OMDOs required for each feature. During initial and delta syncs, the client only downloads data from the assigned OMDOs. Activating specific OMDOs determines the entities and data that is downloaded to the mobile device.

Procedure

- 1. Navigate to *Component Assignments* from the home page. Select your application in the *Mobile Application Filter* dropdown. Click on your application hyperlink in the *Search Result* table.
- 2. Click the *Change* button. Enable or disable desired features using the *Active Flag* checkbox. *Save* your changes.
- 3. Select the Switchable Features tab.
- 4. Click the *Change* button. Enable or disable desired OMDOs using the *Active Flag* checkbox. *Save* your changes.

O Note

Don't select OMDOs that belong to the online service (ex: /MERP/ SAP_ONLINE_LOOKUP_EXT_<version>). These online service entities might not exist in the base service (/MERP/SAP_ASSET_MANAGER_<version>).

O Note

If you don't see an expected feature in the list, ensure it's enabled on the *Mobile Application Configuration Features tab*. See the Configuring Features [page 90] procedure for more information.

Next Steps

After you've enabled or disabled a feature in the *Component Assignments* page, navigate to *Home Mobile Application Configuration Parameters tab*. Find the parameter group and parameter name and maintain the feature enablement accordingly.

3.1.6 Inventory Clerk Parameter Configuration

You can search for inventory objects you want to process directly from your mobile device.

Based on the search criteria, the application will search for objects locally or in the backend (if enabled). Objects matching the oMDO filter values will be returned in the search results.



- CONF_CNTRL: Default value is blank and used in PO and STO search
- DELETE_IND: Default value is blank and used in PO, STO, RS, and PI search
- INBOUND_DELV_TYPE: Default value is 'EL' and used in IB search
- MAX_NO_OF_HITS: Default value is '1000' and applied for each object search individually
- OPEN_FOR_GOODS_MVMNT_ONLY: Default value 'X' and applied for in each object search

O Note

This filter is cascaded and set to active for all inventory objects oMDO except the physical inventory.

- OUTBOUND_DELV_TYPE: Default value is 'LF' and used in OB search
- PHYINV_TXN_TYPE: Default values are 'IB' and 'IN'. Used only in the physical inventory search.
- PLANT: Default value is none and used in each object search
- PO_DOC_TYPE: Default value is 'NB' and used in PO search
- PUR_DOC_CAT: Default value 'F' and used in PO search
- RESV_MVMT_TYPE: Default value is none and used in RS search

• STO_DOC_TYPE: Default value is 'UB' and used in STO search.

3.2 Mobile Application Configuration Procedures

3.2.1 Mapping Work Orders to a STARTED Status - Overview

By default, the SAP Service and Asset Manager application maps the *STARTED* work order status on the client to the *REL* status in SAP Mobile Add-On.

In many implementations, a status of *MOBI* is used in SAP Mobile Add-On to indicate that the work order is started by a technician. The *MOBI* status cannot be modified on the back end.

You can map the mobile status to a different status within SAP Mobile Add-On by altering the mobile application configuration for SAP Service and Asset Manager and changing the system status technical code for the STARTED mobile status. After you change the system status technical code, updates to SAP Mobile Add-On made when a user starts a work order set the status in SAP Mobile Add-On to the MoBI status, matching the entered technical code.

The only modification to make is in the ConfigPanel, in the *Mobile Application Configuration* page, *Mobile Status Setting* tab. Change the mobile status for a started work order in the list of the mobile status options for SAP Service and Asset Manager, with the system status value of that same record altered to use the technical code of the desired status.

3.2.1.1 Changing the Mapping of a Mobile Status to STARTED

Prerequisites

Address the following before performing this procedure:

- Determine and note the technical code of the work order system status to which the mobile status STARTED will be mapped, as it is used in the procedure.
- The system status to which you are mapping the mobile status of STARTED in this procedure is configured as a work order status.
- The person performing this procedure has access to the ConfigPanel and permissions to change configuration settings of the elements within it.

Context

The following procedure describes the steps required to change a system status when a mobile STARTED status is mapped to it.

Procedure

- 1. Starting from the ConfigPanel home page, click the *Mobile Application Configuration* link. Then click the *Mobile Status Setting* tab.
- 2. Choose your desired mobile application from the list of *Defined Mobile Applications* in the left pane.

The application level status settings display in the tab to the right. Information includes the *Mobile Status List*.

- 3. In the *Mobile Status List* table, find the *Object Type* of <WORKORDER> with a *Mobile Status* of <STARTED> and click the *Change* button.
- 4. Change the *System Status* value to the technical code of the system status to which the STARTED mobile status should be mapped. When done, click *Save*.

Results

After completion of the procedure, the STARTED mobile work order status is mapped to a different system status than the default REL status.

3.2.2 Configuring Auto-Sync

You can enable, disable, and customize parameters related to the auto-syncing of the app in the ConfigPanel.

Context

You can configure the following parameters to customize the auto-syncing of the app in the *AUTO_SYNC* parameter group:

- ON_CONNECTION_CHANGE: Enables or disables auto-sync on network connectivity changes
- ON_STATUS_CHANGE: Enables or disables auto-sync on mobile status changes
- PERIODIC: Enables or disables periodic auto-sync
- ON_FOREGROUND: Enables or disables auto-sync when the app moves to the foreground on the mobile device
- ON_SAVE: Enables or disables auto-sync on a database save. Used in conjunction with the THRESHOLD_PERIOD parameter.
- THRESHOLD_PERIOD: If enabling the ON_SAVE parameter, set the threshold period in minutes.

Procedure

- 1. Ensure the CA_AUTO_SYNC feature is enabled for your personas. See the Configuring Personas and Features Overview [page 83] topic and subtopics for detailed information.
- 2. Navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The *Parameter List* populates with a list of all parameters available for the application.

3. Configure one or more parameters in the *AUTO_SYNC* group as desired.

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0000000169	AUTO_S	INC	ON_CONNECTION_CHAN	GE	N			Application	0000000000	~	~		
000000170	AUTO_S	/NC	ON_FOREGROUND		N			Application	0000000000	~	v		
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000000172	AUTO_S	INC	ON_STATUS_CHANGE		N			Application	000000000	~	\checkmark		
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000000004	BACKGR	OUNDCOLOR	ValidationView		fce9e9			Application	000000001	\checkmark	\checkmark		
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- 4. Check the <*Active*> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <*No Runtime Change*> box to ensure the value of the parameter isn't overridden at runtime through synchronization processing.
- 5. Save your changes.

3.2.3 Configuring CATS and PM Confirmation Time Entries

Use parameters to configure CATS and PM confirmation minute interval values.

Prerequisites

If you're using CATS, the SAP HR module must be installed.

Context

The HR Timesheet feature is called *HR_TIMESHEET*. The PM Confirmation feature is called *PM_CONFIRMATION*. By default, the PM Confirmation feature is enabled. Note that only one feature should be enabled at any given time.

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

Use the *CatsMinuteInterval* parameter when CATS is enabled and the *LaborTimeMinutesInterval* parameter when PM confirmations are enabled. The following procedure is the same for either parameter, even though this guide is using the *CATSMinuteInterval* parameter as an example.

When a mobile user manually logs their time, or their time is automatically logged for them through the use of the application, the time logged is rounded to the nearest interval configured. For example, you manually log an additional 12 minutes of work on a work order on a mobile device. Your *CATSMinuteInterval* parameter is set to 15. Therefore, your additional time logged is automatically rounded up to 15 minutes. The time entry screens also have their duration control values limited to minute values matching the configured interval.

The default value for both parameters is 15.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. The *CATSMinuteInterval* parameter is found in the *TIMESHEET* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the *CATSMinuteInterval* parameter and click the *Change* button.

(i) Note

You can find LaborTimeMinutesInterval parameter in the PMCONFIRMATION group.

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000000128	B SUPPORT	Email	support@sap.com	Applic 0	0000000	\checkmark	~	
000000120	9 SUPPORT	Facetime	1-800-677-7271	Applic 0	0000000	\checkmark	~	
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- 3. You can change either the CATS or the PM confirmation labor time interval to the following values:
 - 1
 - 5
 - 10
 - 15
 - 30

If you accidentally set the parameter to an interval value that isn't an allowed value, the parameter automatically defaults to a value of *15* on the client device.

- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter isn't overridden at runtime through synchronization processing.
- 5. Save your changes.

3.2.4 Configuring Clock In Clock Out

The Clock In Clock Out (CICO) feature decouples time tracking from the mobile status of a work order or operation, allowing multiple users to start and log time against the same work order or operation simultaneously.

Overview

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

The Clock In Clock Out feature is called *PM_CLOCK_IN_CLOCK_OUT* .

The CICO parameter in the ConfigPanel allows multiple users to work on the same work order or operation, where all users receive the work orders and operations to their devices. CICO allows multiple work orders and operations to be in the Started state that belong to different users. Mobile device users are able to see the CICO state of all work orders or operations on their device. Users can also filter their work order or operations lists based on clock in or clock out status.

If CICO is enabled in the ConfigPanel:

- Multiple people can work on the same work order or operation even if the work order or operation is already started by another user
- Users can clock in to any work order or operation on their device
- Users can only clock in to one work order or operation on their device at a time
- Users must clock out of the current work order or operation before clocking in to a different work order or operation
- All time recording (CATS and Confirmation) uses the clock in clock out period as the default duration in time entry screens
- When a user clocks in to a work order or operation:
 - The timestamp of the work order or operation is saved to a user-specific table that is persisted in the back end
 - The mobile status of the work order or operation is set to Started if it isn't already in a started state
- When a user clocks out of a work order or operation:
 - The work order or operation status is set to either Hold or Complete
 - If a work order or operation is set to Complete and Confirmations are used, the user can set it as the final confirmation

If CICO is disabled in the ConfigPanel:

- A user can start any work order or operation that is in a Hold, Received, or Local state
- A user can start only one work order or operation at a time
- The mobile status of a work order or operation is used to track time in either CATS or Confirmations

How to Set the CICO Parameter Using the Configuration Panel

- 1. Using the ConfigPanel, navigate to *Component Assignments*. Select your application in the *Mobile Application Filter*. Click the application link in the *Search Result* table. The *Application Assignment Definitions* page displays.
- Click the Change button. Find the PM_CLOCK_IN_CLOCK_OUT feature ID in the MAINTENANCE_TECHNICIAN user persona part of the table. Enable or disable the feature using the Active Flag checkbox.

SAP Mobile	Application Integration Framework Configuration		
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ConfigPanel Home Mobile Application Filter: SAP Servi	ice and Asset Manager 🗸 🗸		
plication Assignment Definitions			
🖉 Change 🖕 Application Search			
Mobile Application: SAP_SERVICE_ASSET_MANAGER_ Mobile Appl. Type: oData Applicati	ion Release: Mobile App. Desc.: SAP Ser	vice and Asset Manager	
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User Persona: MAINTENANCE_TECHNICI/ V	App. Feature Id: PM_CLOCK_IN_CLOCK_OUT	~	
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Feature Assignment			
Display Option ~			
User Persona	App. Feature Id	In-Scope	Active Flag
MAINTENANCE_TECHNICIAN	PM_CLOCK_IN_CLOCK_OUT	v	\checkmark

3. Save your changes.

3.2.5 Configuring Signature Control

Use parameters to configure signature control.

Context

Use the *SIGN_CAPTURE* parameter group and the following parameters within the group to configure signature control for SAP Service and Asset Manager:

- OP.Complete: Enable for operations
- SubOp.Complete: Enable for suboperations
- WO.Complete: Enable for work orders

A Restriction

The digital signature feature is available in SAP S/4HANA 2020 and above releases. The digital signature feature is not available for SAP ERP systems or SAP S/4HANA systems lower than 2020.

By default, the signature control feature is not enabled. To enable signature control:

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. The signature control parameters are found in the *SIGN_CAPTURE* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the parameter you want to configure and click the *Change* button.

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000000084	REMAIND	ER	NameLength		85		Application	000000001	\checkmark	\checkmark	
000000085	SIGN_CA	PTURE	OP.Complete		Y		Application	0000000000	\checkmark		
000000086	SIGN_CA	PTURE	SubOp.Complete		Y		Application	0000000000	\checkmark		
000000087	SIGN_CA	PTURE	WO.Complete		Y		Application	0000000000	\checkmark		
000000088	SUPPOR	т	Email				Application	000000001	\checkmark	~	
000000089	SUPPOR	т	Facetime				Application	000000001	\checkmark	~	
000000090	SUPPOR	т	Phone				Application	000000001	\checkmark	~	
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- 3. Make your desired parameter association changes. Enable the parameter as follows:
 - Y: Control is displayed on the client and is required before completing the object
 - N: Control is not displayed on the client (enabled by default)
 - O: Control is displayed on the client and is an optional step to complete the object

Note

If the parameters have no *Parameter Value* assigned, signature control does not display on the client.

- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter is not overridden at runtime through synchronization processing.
- 5. Save your changes.

3.2.6 Configuring Namespace Check

SAP provides namespace check for the following configuration areas:

- oMDO class
- oData Model Entity Type Name

- Entity Set Name
- Entity Type Property Name
- Association Name
- Association Set Name
- Navigation Property Name
- Navigation Property Technical Name
- User Attribute

This works so that only Y or Z namespace can be used in the user SAP system while only the partner namespace is allowed in the partner system.

With SAP Service and Asset Manager 2210 or earlier versions, you can bypass namespace checks by setting the *NO_NAMESPACE_CHECK* runtime parameter to X. Namespace bypass is not applicable to the Persona and Feature configuration, whereby a custom or partner namespace remains applicable in those areas and cannot be bypassed.

③ Note

As of SAP Service and Asset Manager 2305, you can no longer use the runtime parameter to bypass namespace check. A custom or partner namespace is enforced in the above mentioned configuration areas. For more information on how to set the runtime parameter, see the https://launchpad.support.sap.com/#/notes/2713969/ SAP note.

3.2.7 Digital Signature Overview

The digital signature feature performs a verification of work by digitally signing for the work using a user name and password. The digital signature framework is able to create digital signature verification by using a back-end user name and registered time-based one-time password, or TOTP. The TOTP is brought by the CL_TOTP object.

The digital signature UI5 reuse component provides an OData service that allows for direct online interaction by the client to register a digital signature completed work.

The Digital Signature feature is called CA_DIGITAL_SIGNATURE. By default, the feature is not enabled.

(i) Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

For complete information on digital signature, see the Digital Signature guide, specifically the Implementation Guide for UI5 Reuse Component topic and subtopics.

Limitations

- SAP Service and Asset Manager digital signature relies on the CL_TOTP object interface.
- SAP Service and Asset Manager digital signature uses a connection to the UI5 Reuse component in digital signature. The UI5 Reuse component provides the ability to digitally sign different objects.
- Digital signature support from SAP Service and Asset Manager is only available on an SAP S/4HANA 2020 or later back end system. Digital signature is therefore available for SAP Service and Asset Manager 2105 or later releases installed on a SAP S/4HANA 2020 or later back end system.
- Digital signature is supported with any two-eyed (2E) strategy. Out of the box, the TOTP_2E strategy is used. TOTP_2E is the two-eyed principle of a technician signing the operation for their work. You can configure the 2E strategy by navigating to Data Mobile Data Object Configuration Data Filter. Select the SAM2310_DSIG_CONFIGURATION OMDO with the filter SIGNATURE_STRATEGY.

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	UG_4E	Two Signers	Syst. Signatu 🗸 Pos 🗸 Pos 🗸 Pos 🗸 🗌	
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	UP_4EYES	Digital Signature: 4E Username/Password	Syst. Signatu 🗸 Req 🗸 Pos 🗸 Pos 🗸 🗌	
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3.2.7.1 Enabling Digital Signature

Prerequisites

Ensure you're following all points discussed in the *Limitations* section of the Digital Signature Overview [page 107] topic.

An authenticator application, such as Microsoft Authenticator, must be installed on the mobile device, in order to use the TOTP process.

(i) Note

To enable digital signature for work order headers, follow the tutotial https://blogs.sap.com/2021/11/09/ sap-asset-manager-enable-digital-signature-for-work-order-headers/

Procedure

1. Create a destination in SAP Business Technology Platform Mobile Services (SAP BTP services): Create a specific destination in SAP BTP services that points to the digital signature service.

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The digital signature service must be exposed to the back-end gateway in transaction /n/IWFND/ MAINT_SERVIVCE. The external service name that must be exposed is ODATA_DIGITAL_SIGNATURE_SRV.

If a front-end service exists, expose the digital signature service in the same way you expose other services.

2. Expose the service on SAP BTP services: Create a mobile destination and attach it to the SAP Service and Asset Manager 2310 application. The destination name is *DEST_DIGITAL_SIGNATURE_PPROP* with the URL pointing to the back-end service for digital signature.

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SAP Mobile Cards		Mobile Destinations				
📫 Features						Use a Cloud Foundry Service 📑 ↑↓
🛗 Analytics	>					Use a cloud Foundry Service 📄 🕠
玲 Settings	>	Name	URL	Rewrite Mode	SSO Mechanism/ Authentication	Actions
		DEST_DIGITAL_SIGNATURE_PPROP	http://qkj:443/sap/opu/odata/sap/ODATA_DIGITAL_SIGNATURE_SRV /	Rewrite URL	Cloud Connector SSO	🗟 Ping 🖵 🖉 💼
		DEST_SAM2105_ONLINE_PPROP	http://qkj:443/sap/opu/odata/MERP/SAP_ONLINE_LOOKUP_EXT_21 05/	Rewrite URL	Cloud Connector SSO	🗟 Ping 🖵 🥒 💼
		DEST_SAM2105_PPROP	http://qkj:443/sap/opu/odata/MERP/SAP_ASSET_MANAGER_2105/	Rewrite URL	Cloud Connector SSO	🗟 Ping 🛄 🥒 💼
🖉 Important Links						
Legal Information						

3. Enable digital signature on the ConfigPanel:

- a. Open the ConfigPanel and navigate to Mobile Application Configuration Parameters tab . Select your application release.
- b. Enable the *DIGITAL SIGNATURE* parameters required for your site.

	ile Application: ile App. Desc.:	SAP_ASSET_MANAGER_		Release:				
٩рр	lication Par	ameters						
Para	ameter List							
ſx	Import/Export	\checkmark					Search:	
-	Import/Export RecNo	Parameter Group			Param. Value	V	Search: Scope	Dep. Re
			ত Param. Name NO.Complete		Param. Value Y	7		Dep. Re
0	RecNo	Parameter Group				Ÿ	Scope	0000000

c. Save your changes.

3.2.7.2 Troubleshooting: Unable to Unregister the Device

Procedure

1. Use transaction code SU3 on the SAP GUI. Choose TOTP Registration from the menu options.

The *Administration of TOTP Devices* window appears. The TOTP Devices table should contain a default entry. If the entry is missing, continue this procedure.

2. Open the Administration & Monitoring Portal through the transaction code /n/SYCLO/ADMIN. Select the *Administration* tab.

MC Today's	bile Solution	Overview			
	Date.	🛅 📿 Refresh 📑 Re-Calo	culate Statistics Last calculation time		
	t System Status (Checks of criti eration Status	cal framework settings):	Error View Detail		
Tota	l Number of Mobile Application	1.535 View Detail	Total Number of Middleware Servers: Total Number of Licensed Users: 0	View Detail	
	ber of Active Users: I Number of Communication Se	1 View Detail essions: 4 View Detail	Number of Users With Exception: 2 Number of Push Instances: 2	2 View Detail 241 View Detail	

3. Select the User Management tab. Provide the <Mobile Application> and <User> as search input. Click Search.

User Management	Middleware User Management						
Server Management	Search Mobile Users						
Runtime Logging Level Setting Mobile Application Parameters	Basic Search Parameters						
	* Mobile Application: SAP Asset Managei Viser: Q Search						
	Search Result						
	View. [Standard View] Viewsion Export V						
	User Id Mobile App Server Serial No Lock Flag Created On						
	O Wo data found						
	Mobile User Detail (Display Mode)						

4. Select the appropriate entry from the *Search Result* section. Click the *Preference Info* tab.

User Management M	Middleware User Management								
Server Management Runtime Logging Level Setting	Search Mobile Users								
Mobile Application Parameters	Basic Search Parameters _								
	* Mobile Application: SAP Asset Manager Ulser:								
	Search Result								
,	View: [Standard View] View: Export								
	User Id Mobile App	Server Serial No	Lock Flag Created On						
	SAP_ASSET_MANAGER_								
	Mobile User Detail (Display Mode)								
	🖉 Change								
	Basic Info User Attributes Preference Info Cross Reference Lis	st Client Registration Info Persona Assignment							
	Information List								
	Preference Group Preference Name		Preference Value						
	TOTP_DEVICE DeviceGUID								
	O TOTP_DEVICE DeviceID								
	DIG_SIG_SIGNKEY MyNotificationHeade	ers('10004649')							
	Cross Reference Life Antiputes Preference Info Cross Reference Life Information List Preference Group Preference Name TOTP_DEVICE DeviceGUID TOTP_DEVICE DeviceID								

5. Delete both TOTP_DEVICE-related entries.

6. Open your authenticator app. Delete the old token, then restart the registration process for the device.

3.2.8 Configuring Notification Catalog Types

Use parameters to configure the notification catalog types.

Context

Code groups that belong together in terms of content are grouped in catalogs. These catalogs are identified by the catalog type (a number or a letter). For example, in this way, you combine:

- All code groups for particular problems for a catalog type
- All code for causes for another catalog type and
- All code groups for activities for a further catalog type

Use the *CATALOGTYPE* parameter group and the following parameters within the group to configure your catalog types for notifications in SAP Service and Asset Manager:

- CatTypeActivities: Default is A
- CatTypeCauses: Default is 5
- CatTypeDefects: Default is C
- CatTypeObjectParts: Default is B
- CatTypeTasks: Default is 2
- CatalogProfileOrder: Default is Equipment, Functional Location, Notification Type

The CATALOGTYPE parameters correspond to the rules found in the OData mobile data object SAM2310_CATALOG_CODES. You can add a new data filter rule to your customer namespace, or change the existing parameter-rule association to a new parameter-rule association.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. The *CatType[xxx]* parameters are found in the *CATALOGTYPE* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the parameter you want to configure and click the *Change* button.

	General	Mobile Statu	is Setting	Conversion Exit Setting	System Components	Parameters	Client Globals	User Attributes					
M	obile App	olication Inf	0										
M	obile Applicat	tion:	-		Release:								
M	obile App. De	esc.:	e Renge 11										
Ap	plication	n Paramete	rs										
P	arameter	List											
	🛃 Add	🔂 Delete 👔	Delete All	Import/Export ~									Search:
	RecNo	Parar	meter Gro	Param. Name		Param. Va	alue		Scope	Dep. RecNo	Active	No Change	Comment
	0000000	0007 BDSD	OCUMENT	Notification		BUS2038			Application	000000001	\checkmark	\checkmark	
	0000000	0008 BDSD	OCUMENT	WorkOrder		BUS2007			Application	000000001	\checkmark	~	
	0000000	0009 CATA	LOGTYPE	CatTypeActivities		А			Application	0000000000	\checkmark	v	
	0000000	0010 CATA	LOGTYPE	CatTypeCauses		5			Application	0000000000	\checkmark	1	
	0000000	0011 CATA	LOGTYPE	CatTypeDefects		С			Application	000000000	\checkmark	1	
	0000000	0012 CATA	LOGTYPE	CatTypeObjectParts		в			Application	000000000	\checkmark	\checkmark	
	0000000	0013 CATA	LOGTYPE	CatTypeTasks		2			Application	000000000	\checkmark	1	
	000000	0014 CATA	LOGTYPE	CatalogProfileOrder		Equipment	, FunctionalLocation,	NotificationType	Application	000000000	\checkmark	\checkmark	
	0000000	0015 COLO	R	ValidationMessage		684342			Application	000000001	\checkmark	\checkmark	
	0000000	DOCL	JMENT	Equipment		EQUI			Application	000000000	\checkmark	\checkmark	
P	arameter	r Detail											
1		arameter Group	CATALOGT										
		* Param. Name						Param. Scope:	Application	\sim			
		Param. Value											
	Ru	ule ld:						V Use Rule:					
	Depender	nt Parameter Id						- -					
1	ependent Pa	arameter Group											
1	Dependent Pa	arameter Name											
	Dependent Pa	arameter Value											
		Comment											
		Active Flag											
	No R	Runtime Change	✓										

- 3. Make your desired parameter association changes, or change the value of a parameter to *Z*, a custom activity catalog type.
- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter is not overridden at runtime through synchronization processing.
- 5. Save your changes.
- 6. If you are creating a custom activity value type, navigate to Data Mobile Data Object Configuration
 > Data Filter Tab > SAM2310_CATALOG_CODES > Operation READ > Standard Filter > CATALOG_TYPE .
- 7. Click the *Change* button. Add the new value. For information on working with rules, see Working with oData MDO Filter Rules [page 149].
- 8. Save your changes.

3.2.9 Enabling and Disabling Features Per User Through SAP Authorization

Using parameter framework configuration, configure parameters to enable or disable various features per the authorization of the user in the back end.

Each mobile user is connected to a back end SAP user. The back-end SAP user can be assigned one or more roles. These roles grant their holders authorizations within the back end system. Through parameter configuration, SAP provides a standard rule handler that performs a TCode authorization. SAP also provides new globals that can turn on and off new features.

If a parameter is enabled to use a rule instead of a global, and the user role has an authorization to run a specific transaction code, then that specific feature is enabled for that SAP user. If the user has the authorization' for a specific transaction code, then the specific feature is disabled for that mobile user. Therefore, depending on the authorization of the SAP user, the feature now either works or doesn't work, displays, or doesn't display (depending on the feature function), rather than is turned on or off for all users.

Features Available Through SAP Authorization

The following features are available for you to enable or disable. Use the following subsection to learn how to use the ConfigPanel to enable or disable a feature based on the authorization of the user.

Component	Functionality	Category	TCODE	Back-End Param- eter	Comments
SAP ASSET MAN- AGER	Create work order	Work Orders	IW31	Enable.WO.Create	Includes opera- tions and suboper- ations
SAP ASSET MAN- AGER	Edit work order	Work Orders	IW32	Enable.WO.Edit	Includes opera- tions and suboper- ations (except lo- cal)
SAP ASSET MAN- AGER	Create Notification	Notifications	IW26	Enable.NO.Create	Includes items, tasks, and activi- ties
SAP ASSET MAN- AGER	Edit Notification	Notifications	IW22	Enable.NO.Edit	Includes items, tasks, and activi- ties (except local)
SAP ASSET MAN- AGER	Edit FLOC	Functional Loca- tion	IL02	Enable.FL.Edit	Includes adding characteristics (except local)
SAP ASSET MAN- AGER	Edit equip	Equipment	IEO2	Enable.EQ.Edit	Includes adding characteristics, in- stall, and disman- tle (except local)

Component	Functionality	Category	TCODE	Back-End Param- eter	Comments
SAP ASSET MAN- AGER	Measurement readings	Measurement	IK11	Enable.MD.Create	
SAP ASSET MAN- AGER	Equip attachment upload	Attachments	N/A	Enable.EQ.Attach	See the Ge- neric Authorization Check section in this topic
SAP ASSET MAN- AGER	FLOC attachment upload	Attachments	N/A	Enable.FL.Attach	See the Ge- neric Authorization Check section in this topic
SAP ASSET MAN- AGER	Allow time record- ing	CATS	CAT2	Enable.Cats.Create	
SAP ASSET MAN- AGER	Allow confirma- tions	Confirmation	IW41	Enable.Conf.Cre- ate	
SAP ASSET MAN- AGER	Allow final confir- mation	Confirmation	N/A	Enable.Conf.Cre- ate.Final	See the Ge- neric Authorization Check section in this topic
SAP ASSET MAN- AGER	lssue and return parts	MIGO	N/A	Enable.Parts.Issue	See the Ge- neric Authorization Check section in this topic
CUSTOMER SERV- ICE	Service notifica- tion create	Notifications	IW51	Enable.SNO.Create	
CUSTOMER SERV- ICE	Service notifica- tion edit	Notifications	IW52	Enable.SNO.Edit	Except local
ASSET CENTRAL	Add checklist	Checklist	N/A	Enable.CL.Create	See the Ge- neric Authorization Check section in this topic
ASSET CENTRAL	Fill checklist	Checklist	N/A	Enable.CL.Edit	See the Ge- neric Authorization Check section in this topic
CREW	Manage crew	Crew	N/A	Enable.Crew.Man- age	See the Ge- neric Authorization Check section in this topic
SUPERVISOR	Enable the super- visor role	Supervisor		SupervisorRole	

How to Enable or Disable Features Per User Through Parameters

- Using the ConfigPanel, navigate from the main screen to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application. The Parameter List table populates with a list of all globals available for the application.
- Perform a search for the parameter you want to enable or disable as a feature by user role by using the table in this topic to ensure that the parameter is available in the parameter framework for configuration. Search for your parameter in the *Parameter List* using the *Search* box. All user authorization parameters are found under the <Parameter Group> name of USER_AUTHORIZATIONS. Select your parameter and click the *Change* button.
- 3. The rule /SMFND/CL_CORE_TCODE_CHECK_RU TCode Authorization Check is already selected for you in the <Rule ID> field. When you check the <Use Rule> checkbox, the rule is active.
- 4. Change the <Param. Scope> dropdown selection from Application to User.
- 5. If needed, select the appropriate < Dependent Parameter ID> from the dropdown list.
- 6. Check the <Active Flag> checkbox to ensure that your new parameter is active for the user role. Save your changes.

See the following screenshot for an example of a configured user role parameter:

neral Mot	bile Status Se	etting Conve	rsion E	Exit Setting	System Components	Parameters	Client Globals	User Attributes						
ile Applicati	ion Info													
e Application:	SAP_ASSET	_MANAGER_			Release:									
e App. Desc.:	SAP Asset M	lanager												
lication Para	ameters													
ameter List														
Import/Export \	-												Search:	User
RecNo	Paramete	er Group	٣	Param. Name			Param. Value		Ŧ	Scope	Dep. RecNo	Active	No Change	Comment
000000086	ASSIGNM	IENTTYPE		Notification						User	000000001	~	\checkmark	
000000087	ASSIGNM	IENTTYPE		WorkOrder						User	000000001	~	\checkmark	
8800000008	USER_AU	JTHORIZATIONS		Enable.CL.Cre	eate		Y			User	0000000000	~		
000000089	USER_AU	JTHORIZATIONS		Enable.CL.Edi	it		Y			User	0000000000	\checkmark		
000000090	USER_AU	JTHORIZATIONS		Enable.Cats.C	reate		Y			User	0000000000	~		
000000091	USER_AU	JTHORIZATIONS		Enable.Conf.C	create		Y			User	0000000000	~		
000000092	USER_AU	JTHORIZATIONS		Enable.Conf.C	Create.Final		Y			User	0000000000	\checkmark		
000000093	USER_AU	JTHORIZATIONS		Enable.Crew.M	Manage		Y			User	0000000000	\checkmark		
000000094	USER_AU	JTHORIZATIONS		Enable.EQ.Att	ach		Y			User	0000000000	\checkmark		
000000095	USER_AU	JTHORIZATIONS		Enable.EQ.Ed	lit		Y			User	0000000000	\checkmark		
arameter Detail]	JTHORIZATIONS		Enable.EQ.Ed	it		Y			User	0000000000	V		
arameter De	eter Group:	USER AUTHOR	7.71	210										
	am. Name:	Enable.Cats.Crea		5143				Pa	ram. Scor	e: User				
		Y						Use Language Sp						
Rule Io			RET	CODE CHECK	_RU - TCode Authorizatio	on Check		Use Rule:						
	CODE: CA		1	CODE_ONEON	-res roous Admonzatio	an oncor		ose Rule.	-					
Dependent Pa		12												
ependent Param														
ependent Param														
Dependent Param														
	Comment													

Generic Authorization Check

Use the rule /SMFND/CL_CORE_AUTH_CHECK_RU - TCode Authorization Check to enable a more generic authorization check. This rule is used for the following parameters:

- Enable.EQ.Attach
- Enable.FL.Attach
- Enable.Conf.Create.Final
- Enable.Parts.Issue
- Enable.CL.Create
- Enable.CL.Edit
- Enable.Crew.Manage

To use the /SMFND/CL_CORE_AUTH_CHECK_RU - TCode Authorization Check, do the following:

- 1. Create an authorization object. See Authorization Objects for more information.
- 2. Assign the authorization object to a role.
- 3. Assign the role to users who will be using the feature.
- 4. Configure the rule in the ConfigPanel to reference the new authorization object. For more information, see the AUTHORITY-CHECK topic.

3.2.10 Configuring Mobile User Attributes

The User Attributes tab in the Mobile Application Configuration page of the ConfigPanel allows you to maintain multiple values for a selected attribute.

Context

There are three core configuration steps to implement mobile user attributes:

- 1. Create the user attribute using the ConfigPanel
- 2. Define and activate the new user attribute through the Admin Portal
- 3. Define how to consume the data in the OMDO through the ConfigPanel

Procedure

- 1. Create the user attribute using the ConfigPanel:
 - a. From the home page of the ConfigPanel, navigate to Mobile Application Settings Mobile Application Configuration and select the User Attributes tab.
 - b. Click the *Change* button. Create your user attribute using the following fields. See the screenshot for an example:

obile Application (Change	Mode)				
General Mobile St	atus Setting Conversion Exit Setting	System Componen	ts Parameters	Client Globals	User Attributes
Mobile Application I	nfo				
	ASSET_MANAGER_ Release:				
Mobile App. Desc.: SAP A	Asset Manager				
User Attribute Settir	ngs				
Attribute List					
Add Attribute	Delete Attribute				
Attribute Name	Reference Structure Name	Reference Field Name	ValueSet Provider	Class	
PLANT_LOCATION	/SMERP/MM_USER_LOCATION_STR		/SMERP/CL_MM_U	JSRATTR_VALUESE	т
					_
Attribute Detail					
* Attribute Name	PLANT_LOCATION	Des	cription: Plant		
Reference Structure Name	/SMERP/MM_USER_LOCATION_:	Reference Fiel	d Name: WERKS		
ValueSet Provider Class	/SMERP/CL_MM_USRATTR_VALUES	ET -Value Set: User Attrib	ute ValueSet Provide	er Plant/Location	~

- <Attribute Name> and <Description>
- In the <Reference Structure Name> field, create or use an existing reference structure such as *PLANT* or *WORK CENTER*.
- The <Reference Field Name> is optional. Maintain if you're referring to a single field from the structure.
- Create a <ValueSet Provider Class> to populate possible values for your new user attribute. Use handler /SMERP/CL_MM_USRATTR_VALUESET as a reference. Subclass from the base class /SMFND/CL_CORE_USRATTR_VS_BASE.
- c. Click Save to save your changes.
- 2. Define and activate the new user attribute through the Admin Portal:
 - a. Access the Admin Panel from the SAP GUI using transaction code /n/SYCLO/ADMIN.
 - b. From the main page of the Admin Portal, navigate to Administration User Management and select the User Attributes tab in the Mobile User Detail section of the screen.
 - c. Select your desired mobile application from the dropdown. Search for available users connected to your selected application.
 - d. Click the User Attributes tab. Then click the Change button.
 - e. Click the *Add* button. Add the values created in *Step 1*. Repeat this step for all values you created. See the following screenshot for an example.

Middleware User Management

Search Mobile Users

* Mobile Application:	SAP Asset Manager 1911	~	User:	
Last Activity Time:	All \checkmark			

Search Result

Vie	w: [Standard View]] V Print Version Exp	port \sim		6	s
	User Id	Mobile App	Server Serial No	Lock Flag	Created On	1
	AHAMEDR	SAP_ASSET_MANAGER_1911	SCPMS		15.08.2019 10:03:32	
	ARUN	SAP_ASSET_MANAGER_1911	SCPMS		18.02.2020 08:19:29	
	BASAVARAJUJ	SAP_ASSET_MANAGER_1911	SCPMS		19.09.2019 13:08:26	
	BHAGAVAN	SAP_ASSET_MANAGER_1911	SCPMS		18.11.2019 07:42:49	
	BLAKEK	SAP_ASSET_MANAGER_1911	SCPMS		25.07.2019 17:36:19	

Mobile User Detail (Change Mode)

	Basic Info	User Attributes	Preference	e Info	Cross Reference List	0	Client Registration	Info		
Att	ribute Set	tings				А	Attribute Deta	ail		
	Add 📃	Delete					Attribute Nam	ie: F	PLANT_LOCATIO 🗸	
	Attribute Na	ame	Enabled	Value		I	Reference Structur	re: /	SMERP/MM_USER_LOCA	TION_
	PLANT_LC	CATION	\checkmark	1000			Active Fla	ig: 🔽	1	
	PLANT_LC	CATION		3000			Plant	New	York	\sim
						ę	Storage location:		\sim	

3. Define how to consume the data in the OMDO through the ConfigPanel:

- a. From the main page of the ConfigPanel, navigate to Data Mobile Data Configuration Data Filter tab .
- b. Select the OMDO filter to which you're adding the new user attribute from the user attributes defined in the *Mobile Application Configuration* page in the ConfigPanel.
- c. Choose your filter from the *Defined Filters* list. Click *Change*.
- d. Assign your user attribute to the OMDO filter using a dynamic rule. The value is evaluated at runtime based on the runtime mobile user attribute of the user.
- e. Select *Mobile User Attribute* as the <Filter Rule Type>. See the following screenshot as an example.

ata Mobile Data Object Detail (Displa	v Mode)					
Create Copy Create Copy Create Copy Create)					
oMDO Id: SAM _WORK_ORDE	R_GENERI	С		Descripti	on: Work Orde	r	
Mobile Application: SAP Asset Manager							
oMDO Handler: /MERP/CL_PM_WORKOF	RDER_OD :	oMDO					
General Setting Technical Model Info)ata Filter	Field Selec	tion Cha	nge Detection Dep	endent Object	Transaction Setting	ps Outbound Trigger Assi
efined Filters	Rule	Editor					
Operation - CREATE							
		Operation:	READ			Filter Name:	OPER_PLANT
> Data Distribution		Object Name:	AFVC		F	Reference Field Name:	WERKS
> I Data Segment	Data I	Filter Rule Key:	SAM _V	VORK_ORDER_GENER	RIC.READ.OPER	PLANT	
> E Security	E	ilter Rule Type:	Mobile User	Attribute	~		
Standard Filter		itter reale rype.	Mobile oser	Autoure			
BS_DOC_TYPE*	Sele	ect Mobile	User Attril	oute			
译 ACTUAL_FINISH_DATE 译 ACTUAL START DATE							
BASIC FINISH DATE	Mobi	ile User Attribut	_	OCATION - Plant & Loc	ation		
BASIC_FINISH_DATE		Active Fla	g: 🗸				
DATE_CLOSE							
DATE_COMPLETION							
DATE RELEASE	Ru	ile List					
DMS_DOC_TYPE		Rule No.	Rule Type	Rule Value			Active Flag
T DOC_CLASSNAME*		00001	MUSERATTR	PLANT LOCATION			v
F DOC_CLASSTYPE*		00001	MOOLIVIIII	reating_cookinoit			
T DOC_GOS_RELTYPE*							
F KEEP_MOBILE_STATUS_HISTORY							
F OPER_ACTTYPE							
P OPER_CONTROL_KEY							
P OPER_EXCL_SYST_STAT*							
OPER_EXCL_USER_STAT							
OPER_INCL_SYST_STAT							
OPER_INCL_USER_STAT							
F OPER_PLANT*							
OPER_WORK_CENTER*							
SCHED_FINISH_DATE							
SCHED_START_DATE							
SET_INIT_SYS_STATUS*							
SKIP_INIT_STATUS_LOG							

3.2.11 Enabling and Disabling Local Object Mobile Status

The EnableOnLocalBusinessObjects parameter found in the MOBILESTATUS group enables or disables a mobile client user to take a local object through its entire lifecycle even if the client is offline.

Context

If you enable the *EnableOnLocalBusinessObjects* parameter, SAP Service and Asset Manager allows mobile status update changes for the following:

- Work Order Assignment level 1
- Operation Assignment level 2
- Suboperation Assignment level 3
- Notification
- Notification task
- Notification item task

Procedure

1. Navigate to Mobile Application Configuration Parameters tab using the ConfigPanel. Select your application in the left column, Defined Mobile Applications.

The Parameter List populates with a list of all parameters available for the application.

2. Find the *EnableOnLocalBusinessObjects* parameter in the *MOBILESTATUS* group. Scroll down to find the parameter, or perform a search using the *Search* box. Highlight the parameter you want to configure and click the *Change* button.

bile Application:	SAP_ASSET_MANA	BER_	Release:								
bile App. Desc.:	SAP Asset Manager										
plication Para	ameters										
rameter List											
Import/Export v	2								Search:	MOBILESTATUS	1
RecNo	Parameter Group	Ŧ	Param. Name	Param. Value	7	Scope	Dep. RecNo	Active	No Change	Comment	
000000035	MOBILESTATUS		Completed	COMPLETED		Application	0000000001	~	V		
000000036	MOBILESTATUS		EnableOnLocalBusinessObjects	Y		Application	0000000000	~	 	Be able to change the mobile status of newly	
000000037	MOBILESTATUS		HOID	HUED		Application	000000000	~	~		-
000000038	MOBILESTATUS		Received	RECEIVED		Application	000000001	\checkmark	×		
000000039	MOBILESTATUS		Started	STARTED		Application	000000001	~	×		
000000040	MOBILESTATUS		Success	SUCCESS		Application	000000001	~	×		
000000041	MOBILESTATUS		Transfer	TRANSFER		Application	000000001	~	V		
000000042	NOTIFICATION		DescriptionLength	40		Application	000000001	~	V		
000000043	NOTIFICATION		NotificationType	M1		Application	000000001	\checkmark	\checkmark		
000000044	NOTIFICATION		PlanningPlant	1000		Application	000000001	~	\checkmark		
Parameter Detail Parameter De	etail										
Param	eter Group: MOBI	ESTATUS									
Par	am. Name: Enable	OnLocalBusiness	Objects		Param. Sco	e: Applicat	lion				
Par	ram. Value: Y				Use Language Specific Val	Je:					
Rule Id	t:				Use Rule:						
Dependent Pa	rameter Id:										
Dependent Param	eter Group:										
Dependent Param											
Dependent Param											
	Comment: Be ab	to change the mo	obile status of newly created objects nobile device before syncing.								
	that a										

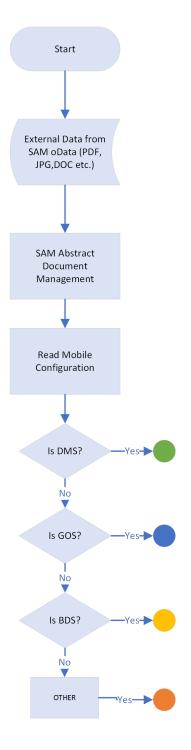
- 3. Enable or disable the parameter using the following strings: *Y*, *Yes*, *T*, or *True* are used to enable the parameter. *N*, *No*, *F*, or *False* are used to disable the parameter.
- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. Check the <No Runtime Change> box to ensure that the value of the parameter isn't overridden at runtime through synchronization processing if desired and if not already checked.
- 5. Save your changes.

3.2.12 Abstract Document Management

Abstract document management provides the option to create and read DMS, GOS, or BDS documents without configuration at the client application level.

Abstract Document Management Overview

Hover over the different types of abstract document in the flow chart to view the specific flow chart for the document type.



- DMS Method [page 126]
- DMS Method [page 126]
- BDS Method [page 128]
- Other Method [page 129]

3.2.12.1 Configuring Document Management

Abstract document management provides the option to create and read DMS, GOS, or BDS documents without configuration at the client application level.

Configuring Document Management in the ConfigPanel

Prerequisites

Address the following items before performing the procedure:

- Know the status or statuses that you're filtering on for equipment synchronization, as they're used in the procedure
- Ability to access to the ConfigPanel and permissions to change configuration settings

With a standard activation of a DMS or GOS document management solution, each document type has its own default content repository. Any application consuming document solutions like DMS or GOS follow the back-end configuration settings.

Select **SAM2310_DOCUMENT** from the *oData Mobile Data Object List* and navigate to the following locations:

- Deration CREATE_MEDIA > Data Segment > DOCUMENT_SWITCH >
- Deperation READ > Data Segment > DOCUMENT_SWITCH >

Ensure the repository you're using is set to *Active*:

oMDO Id:	SAM _DOCU	MENT				Descriptio	Abstract Document N	Aanagement			
Mobile Application:	SAP Asset Manag	jer									
oMDO Handler;	/MERP/CL_CORE	ABS DOCUM	ENT OD:								
General Setting Tech	nical Model Info	Data Filter	Field Selectio	n Change Detectio	n D	ependent Object	Transaction Settings	Outbound	Trigger Assignment		
Defined Filters	~	Table Rule	Editor								
V Poperation - CREATE_N	IEDIA	0	peration: REA	D		Filter Name:	DOCUMENT_SWITCH				
V 📃 Data Segment	_						DOCOMENT_SWITCH				
DOCUMENT_SWIT		Reference Tab	le Name: /ME	RP/CORE_ABSDOC_SV	ITCH_S						
BJECT_DOC_TY	PE	Rule C	Category: Stat	c Table Rules	~						
> E Standard Filter				DU00007							
Operation - READ			OBJECT_TYPE								
> E Data Distribution			OBJECTLINK								
V 📃 Data Segment			DMS	Active							
DOCUMENT ON I	DEMAND*		BDS	Active							
DOCUMENT_SWIT	ГСН*		GOS	Active							
> Standard Filter			OTHER	Inactive							
> Soperation - READ_MEI	DIA										
		Rule L	ist								
		OB	JECT_TYPE		OB	JECTLINK	DMS	BC	15	GOS	
		BU	IS2007		PM	AUFK				х	

When you require SAP Service and Asset Manager to create content in a custom repository that

is different than your back-end configuration, use the OTHER option. Implement the BADI // MERP/

IF_CORE_OMDO_ABSDOC_BADI CREATE_OTHER_DOCUMENT. Your implementation must match with the ABS data model to work with standard SAP Service and Asset Manager metadata. See the Other Method [page 129] flow chart for more information.

Configuration Variations

Configuring the Document Solution to Work with a Third-Party Repository or Content Server

Beginning with the SAP Service and Asset Manager 2010 release, SAP Service and Asset Manager supports working with third-party repositories like Open Text or HTTP. Using third-party repositories leverages the backend configuration for GOS, BDS, or DMS for work orders, notifications, equipment, and functional locations. See 2945017 to configure older application releases to work with third part repositories.

When using DMS, create custom storage category *ZEXT* to link to a third-party repository, such as an Open Text content server. See 2945017 for more information. Through this additional configuration, attachments uploaded from the application are stored in the third-party content server rather than the default content server.

See the following release notes for addition information on configuring abstract documents:

- 2457912 / How to Create a Content Repository in OACO
- 782614 /> : Using an External Content Server in the BDS
- 530792 /> Storing Documents in Generic Object Services
- 2571570 /> Where are Documents Physically Stored with Business Communication Services
- 2945017 />>: SAP Asset Manager ABS Enhancement

O Note

It isn't possible to integrate ABS documents with third-party repositories. Use this SAP note to deliver additional parameters such as storage category at an object level.

Document Management Configuration Examples

See the following examples of back-end configuration with a third-party content server:

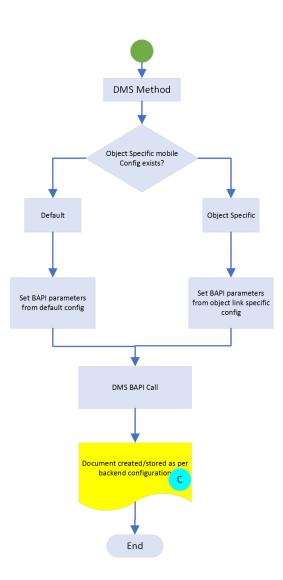
Example 1

Configure third-party repositories like Open Text to work with one of the available document solutions like BDS, DMS, or GOS using the ConfigPanel. Then apply SAP Note 2945017 and configure the desired document solution for work orders, equipment, and functional location objects.

Example 2

Integrate a third-party repository in more than one way with your back-end SAP system. If your implementation doesn't fit with DMS, BDS, or GOS, use the OTHER option in the ConfigPanel. Implement BADI / MERP/ CORE_OMDO_ABSDOC_BADI to align with the implementation.

3.2.12.2 DMS Method

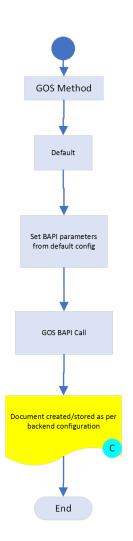


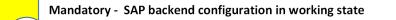


Mandatory - SAP backend configuration in working state

Optional – Customer specific customisation in backend for DMS, GOS or BDS to store documents in an external repository.

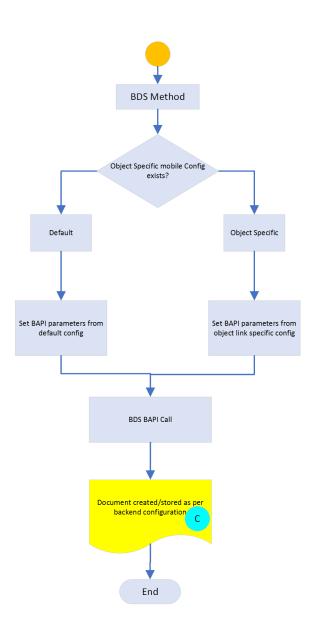
3.2.12.3 GOS Method





Optional – Customer specific customisation in backend for DMS, GOS or BDS to store documents in an external repository.

3.2.12.4 BDS Method

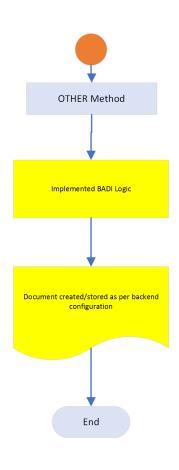




Mandatory - SAP backend configuration in working state

C Optional – Customer specific customisation in backend for DMS, GOS or BDS to store documents in an external repository.

3.2.12.5 Other Method





Mandatory - SAP backend configuration in working state

3.2.12.6 SAM 2305 Document Data Filter

When taking readings in the SAP Service and Asset Manager mobile app, you can attach documents related to S4 service orders, requests, confirmations, contracts, and related items. Activate S4 on the *SAM2305_DOCUMENT* data filter to attach documents to S4 objects.

- 1. Select SAM2305_DOCUMENT in the oData Mobile Data Object List and navigate to the following:
 - Operation CREATE_MEDIA Data Segment DOCUMENT_SWITCH
 - Operation READ Data Segment DOCUMENT_SWITCH
- 2. In the Rule List, activate the following objects:
 - BUS2000116: Service Order
 - BUS2000117: Service Confirmation
 - BUS2000223: Service Request

- BUS2000112: Service Contract
- BUS2000140: Service Product Item
- BUS2000146: Service Mat. Item
- BUS2000159: Service Expense Item
- BUS2000142: ServMatConfirmItem
- BUS2000143: ServProdConfirmItem
- BUS2000158: SrvcExpenseConfItem
- BUS2000137: Service Contr. Item

(i) Note

Ensure that both *BDS* and *GOS* are set to *Active*.

- 3. Navigate to Operation READ Standard Filter DOC_CLASSNAME
- 4. Add a new line to the *Rule List* for each low value and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: BUS2000116
- 5. Activate the following objects:
 - BUS2000117
 - BUS2000223
 - BUS2000112
 - BUS2000140
 - BUS2000146
 - BUS2000159
 - BUS2000142
 - BUS2000143
 - BUS2000158
 - BUS2000137

3.2.12.6.1 S4 Service Order

Context

Procedure

1. Select SAM2305_S4_SERVICE_ORDER in the oData Mobile Data Object list and navigate to the Data Filter tab.

2. In the Defined Filters list, navigate to Operation READ Standard Filter ABS_DOC_TYPE.

3. Set the filter handler

OMDO_ID=SAM2305_DOCUMENT&OPERATION=READ&DOF_NAME=DOCUMENT_SWITCH&OBJECTLINK S=BUS2000116&OBJECT_TYPES=BUS2000116 to Active.

Rule Editor				
Operations	READ	Fibir Name	ABS_DOC_TYPE	
Object Name:	MERFICORE_ABS_DOC_TYPE_S.	Reference Field Name:	AB5_DOC_TYPE	
Data Filter Rule Key:	SAM2305_54_SERVICE_ORDER READ.A	ES_DOC_TYPE		
Filter Rule Type:	Riber Handler	*		
Select Filter Har	ndler			
Input Parameter.	oNDO Fitter Rule - ABS Doc Types ONDO 10-SAM2305, DOCUMENTROPER		SMTCH608JECTLINKSH9J	
Active Flag:				
Rule List				
Rule No. Rule 1	Type Rule Value			Active Flag
00001 H446	LER MERPICL_PM_ABS_DOC_TYPE_OF	N/ONDO_ID+5/W2305_DOCUMENTSO	PERATION-READSDOF_NAME+DOCUMENT_SWITCHS0BJECTURK5-BUS200011660BJECT_TYPES-BUS2000116	

- 4. Enable dependency between the S4 service order and the related document on the mobile device.
- 5. Navigate to the *Dependent Object* tab. Find the *S4SERVDOCUMENT* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 6. Insert the two lines in the *Dependent Object Keys* tab:
 - 1. Source oMDO Field Name: OBJECT_KEY Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_H Dependent Object Key Fieldname: OBJECTLINK
- 7. Insert the two lines in the Origin Object Keys tab:
 - 1. Field name: OBJECT_KEY
 - 2. Field name: DOC_OBJ_ID
- 8. Enable dependency between the S4 service order item and the related document on the mobile device.
- 9. Navigate to the *Dependent Object* tab. Find *S4SERVITEM* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 10. Insert the two lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: ITEM_GUID_CHAR Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_I Dependent Object Key Fieldname: OBJECTLINK
- 11. Insert the three lines in the Origin Object Keys tab:
 - 1. Field name: OBJTYPE_H
 - 2. Field name: OBJECT_ID
 - 3. Field name: NUMBER_INT

3.2.12.6.2 S4 Service Request

Context

Procedure

- 1. Select SAM2305_S4_SERVICE_REQUEST in the oData Mobile Data Object list and navigate to the Data Filter tab.
- 2. In the Defined Filters list, navigate to Operation READ Standard Filter ABS_DOC_TYPE.
- 3. Set the filter handler

OMDO_ID=SAM2305_DOCUMENT&OPERATION=READ&DOF_NAME=DOCUMENT_SWITCH&OBJECTLINK S=BUS2000223&OBJECT_TYPES=BUS2000223 to Active.

Rul	e Edito	¢							
	00	eration:	REA	٥		Filter Name:	ABS_DOC_TYPE		
	Clipic	hiama:		RPICORE_ABS_DOC_TYPE_S		Reference Field Name:	ABS_DOC_TYPE		
Diri	Filter H	In Key:	548	2305_S4_SERVICE_REQUEST.READ	ABS_DO	C_TYPE			
	Filter Ru	le Type:	F814	r Handler	*				
\$	elect Fi	iter Har	dler						
	No	der!	oMD	O Fitter Rula - ABS Doc Types					
	put Para			O_ID=S44/2305_DOCUMENTAOPER	ATIONER	EADSDOF_NAME=DOCUMENT_	MTCHSOBJECTUNKS=8U		
	Activ	Hag 5							
Ruś	e List								
	Pule N	. Rule T	ype	Rule Value					Active Flag
	00005	HAND	LER	MERPICL_PM_ABS_DOC_TYPE_O	RUTOMDO	2_ID+SAM2305_DOCUMENT&OP	RATION-READ&DOF_NAME-DOCUMENT_SHITCH&OBJECTLINKS-BUS2000223&08	ACT_TYPES-BUS2000223	68

- 4. Enable dependency between the S4 service request and the related document on the mobile device.
- 5. Navigate to the *Dependent Object* tab. Find the *S4SERVDOCUMENT* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 6. Insert the two lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: OBJECT_KEY Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_H Dependent Object Key Fieldname: OBJECTLINK
- 7. Insert the two lines in the Origin Object Keys tab:
 - 1. Field name: OBJECT_KEY
 - 2. Field name: DOC_OBJ_ID

3.2.12.6.3 S4 Service Confirmation

Context

Procedure

- 1. Select SAM2305_S4_SERVICE_CONFIRMATION in the oData Mobile Data Object list and navigate to the Data Filter tab.
- 2. In the Defined Filters list, navigate to Operation READ Standard Filter ABS_DOC_TYPE.
- 3. Set the filter handler
 - OMDO_ID=SAM2305_DOCUMENT&OPERATION=READ&DOF_NAME=DOCUMENT_SWITCH&OBJECTLINK S=BUS2000117&OBJECT_TYPES=BUS2000117 to Active.

Rule	Editor								
	Ope		READ.		Filter harns:	ABS_DOC_TYPE			
	Object I		MERP/CORE_ABS_DOC_TYPE_S		Reference Field Name:	ABS_DOC_TYPE			
Deta	Filter Rule	e Key:	SANQ305_S4_SERVICE_CONFIRMA	TION READ ARS,	DOC_TYPE				
F	itter Pule	Type:	Fiber Handler	÷					
Se	lect Filt	ter Hand	dler						
	Han	dart o	MDO Filter Rule - ABS Doc Types						
10	A.R. Parset	orter: 0	MDO_ID-SAN2305_DOCUMENTING	PERATION-REA	DADOF_NAME-DOCUMENT_	SWITCHSOBJECTLINKS-BU			
	Active	Rag (2							
Rule	List								
	Rule No.	Rule Typ	pe Rule Value					Active	r Fla
۲	10000	HANDU	ER MERPICL_PM_ABS_DOC_TYPE	CRUPOMDO_IC	D=SAM2305_DOCUMENTACK	PERATION=READ&DOF_NAME	=DOCUMENT_SWITCH606.ECTUINKS=BU52000L17b08.ECT_TYPE	S=8U52000117	

- 4. Enable dependency between the S4 service confirmation and the related document on the mobile device.
- 5. Navigate to the *Dependent Object* tab. Find the *S4SERVDOCUMENT* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 6. Insert the two lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: OBJECT_KEY Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_H Dependent Object Key Fieldname: OBJECTLINK
- 7. Insert the two lines in the *Origin Object Keys* tab:
 - 1. Field name: OBJECT_KEY
 - 2. Field name: DOC_OBJ_ID
- 8. Enable dependency between the S4 service confirmation item and the related document on the mobile device.
- 9. Navigate to the *Dependent Object* tab. Find *S4SERVITEM* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.

- 10. Insert the two lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: ITEM_GUID_CHAR Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_I Dependent Object Key Fieldname: OBJECTLINK
- 11. Insert the three lines in the Origin Object Keys tab:
 - 1. Field name: OBJTYPE_H
 - 2. Field name: OBJECT_ID
 - 3. Field name: NUMBER_INT

3.2.12.6.4 S4 Service Contract

Context

Procedure

- 1. Select SAM2305_S4_SERVICE_CONTRACT in the oData Mobile Data Object list and navigate to the Data Filter tab.
- 2. In the Defined Filters list, navigate to Operation READ Standard Filter ABS_DOC_TYPE.
- 3. Set the filter handler

OMDO_ID=SAM2305_DOCUMENT&OPERATION=READ&DOF_NAME=DOCUMENT_SWITCH&OBJECTLINK S=BUS2000112&OBJECT_TYPES=BUS2000112 to Active.

Rule Editor				
Operation	READ	Filter Natur.	ABS_DOC_TYPE	
Object Name		Reference Field Name:	ABS_DOC_TVPE	
Data Filter Itulie Kay	SAM2305_54_SERVICE_CONTRACT/RS	EAD ABS_DOC_TYPE		
Filter Rule Type	Filter Handler	🤪 🕹 🕹 🕹 🕹 🕹		
Select Filter H	andler			
Handler*	or the rest of the second state of the second	RATION-READIDOF_NAME=DOCUMENT_	SWITCHLOBURCTURKS-BU	
Active Flag:	8			
10000000				
Rule List	Type Bule Value			Active It
Rule List Rule No. Rul		RUYONDO_EHSAM2305_DOCUMENTSOF	TERATION-READSDOF_NAME-DOCUMENT_SWITCHS/0BJECTUNKS-BUS20003128/0BJECT_TYPES-BUS2000112	
Rule List Rule No. Rul		RUTORDO_DHSAM2205_DOCUMENTSOF	TERATION-READSDOF_NAME-DOCUMENT_SWITCHSOBJECT_INKS-BUS200031260BJECT_TYPES-BUS2000112	

- 4. Enable dependency between the S4 service contract and the related document on the mobile device.
- 5. Navigate to the *Dependent Object* tab. Find the *S4SERVDOCUMENT* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.

- 6. Insert the two lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: OBJECT_KEY Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_H Dependent Object Key Fieldname: OBJECTLINK
- 7. Insert the two lines in the Origin Object Keys tab:
 - 1. Field name: OBJECT_KEY
 - 2. Field name: DOC_OBJ_ID
- 8. Enable dependency between the S4 service contract item and the related document on the mobile device.
- 9. Navigate to the *Dependent Object* tab. Find *S4SERVITEM* object in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 10. Insert the two lines in the *Dependent Object Keys* tab:
 - 1. Source oMDO Field Name: ITEM_GUID_CHAR Dependent Object Key Fieldname: OBJECT_KEY
 - 2. Source oMDO Field Name: OBJTYPE_I Dependent Object Key Fieldname: OBJECTLINK
- 11. Insert the three lines in the Origin Object Keys tab:
 - 1. Field name: OBJTYPE_H
 - 2. Field name: OBJECT_ID
 - 3. Field name: NUMBER_INT

3.2.13 EAM Checklist Overview

EAM processes need checklists for actions such as inspections and maintenance. SAP Service and Asset Manager uses EAM checklists with work orders and operations.

O Note

This core feature is only available on an SAP S/4HANA 2021 or later back end system. This feature is therefore available for SAP Service and Asset Manager 2110 or later releases installed on an SAP S/4HANA or later back end system.

Find the EAM checklist feature in the OMDO handler /MERP/CL_PM_INSPECTION_LOT_OD, as an existing entity. Features of inspection lot are reused to implement the EAM checklist functionality, along with a new entity, EAMChecklistLink. Access the OMDO handler through transaction SE24 on your back end system.

You can view the new entity in the ConfigPanel by navigating to bolata Model Configuration Mobile App SAP_ASSET_MANAGER_<version> /MERP/SAP_ASSET_MANAGER_<version> EAMChecklistLink .

Cr	eate 🗐 Copy	Delete 🖉 Change															
Enti	ty Type Name:	EAMChecklistLink		Activ	e Flaį	g: 🗸					Entity Type Id	:					
Mobi	ile Application:	SAP_ASSET_MANAGER:	: SAP Asset	t Manager													
* oD	ata Service Id:			s	ervice	e: /MERP/	SAP_ASSET	_MANAG	ER_		Version	: 0001					
	* oMDO Id:	SAM2110_INSPECTION_LOT : In	Inspection I	Lot						* oM	DO Entity Type	CHECKLIS	T_LINK : /	MERP/I	PM_C	HECKLIST_LINK	STR
	* Property Na	ame * oMDO Field Nam	ne	Edm Type	Key	Creatable	Updatable	Sortable	Nullable	Filterable	Content Type	Max Length	Precision	Scale	ETag	Conversion Exit	: Disab
	ChecklistID	*CL_OBJKEY - CHA	AR (70	Edm.String	Key	Creatable	Updatable	Sortable	Nullable			0	0	0		Conversion Exit	Disab
	ChecklistID ChecklistStatu	*CL_OBJKEY - CHA IS *CL_STATUS - CHA	AR (70 AR (40	Edm.String Edm.String		Creatable	Updatable	Sortable	_	Filterable				0		Conversion Exit	Disab
	ChecklistID	*CL_OBJKEY - CHA IS *CL_STATUS - CHA	AR (70 AR (40	Edm.String Edm.String			Updatable	Sortable				0	0	0		Conversion Exit	Disat
	ChecklistID ChecklistStatu	*CL_OBJKEY - CHA IS *CL_STATUS - CHA	AR (70 AR (40 HAR (1	Edm.String Edm.String Edm.String			Updatable	Sortable				0	0	0		Conversion Exit	Disat
	ChecklistID ChecklistStatu ChecklistType Deactivated	*CL_OBJKEY - CHA is *CL_STATUS - CHA *CL_OBJTYPE - CH	AR (70 AR (40 HAR (1 1): De	Edm.String Edm.String Edm.String Edm.String			Updatable	Sortable				0	0 0 0	0 0 0 0		Conversion Exit	Disak
	ChecklistID ChecklistStatu ChecklistType Deactivated	*CL_OBJKEY - CHA is *CL_STATUS - CHA *CL_OBJTYPE - CH *DEACT - CHAR (1 *EQUNR - CHAR (1	AR (70 AR (40 HAR (1 1) : De 18) : E	Edm.String Edm.String Edm.String Edm.String				Sortable				0 0 0 0 0	0 0 0	0 0 0 0			Disat
0	ChecklistID ChecklistStatu ChecklistType Deactivated Equipment FunctionalLoc	*CL_OBJKEY - CHA is *CL_STATUS - CHA *CL_OBJTYPE - CH *DEACT - CHAR (1 *EQUNR - CHAR (1	AR (70 AR (40 HAR (1 1): De 18): E 30): F	Edm.String Edm.String Edm.String Edm.String Edm.String				Sortable				0 0 0 0	0 0 0 0	0 0 0 0 0			Disat:
0	ChecklistID ChecklistStatu ChecklistType Deactivated Equipment FunctionalLoc	+CL_OBJKEY - CHA is +CL_STATUS - CHA +CL_STATUS - CHA +CL_OBJTYPE - CH +DEACT - CHAR (1 +EQUNR - CHAR (3 tation +TPLNR - CHAR (3)	AR (70 AR (40 HAR (1 1) : De 18) : E 30) : F MC (12	Edm.String Edm.String Edm.String Edm.String Edm.String Edm.String				Sortable					000000000000000000000000000000000000000	0 0 0 0 0 0		ALPHA	Disal

The *INSPECTION_LOT* OMDO is updated to add a technical entry for checklists. Navigate to b *oData Mobile Data Object Configuration Technical Model Info tab <version>_INSPECTION_LOT*. Be sure to choose your application release version using the *Mobile Application Filter*.

ļ		ohiDO Handler;	MERPICE,	Naragei PULJNSP	ection_U		3					Inspection Lot	
	hnical Model		eno un	1100	Hed se	eason	Charges	ABCOM	Lebendert Udec	i instactor	seads cost	nie officielities	
	Technical Dretty		Leed Drifty	Codeman	v finance			East Description	tion Data Tupe	Comunica Fuit			
	> INSPECTION				NUNSPLI								
	> INSPECTION	PONT			NUMP.F								
	> INSPECTION			MERM	NUNSP, C	HAR BY	TITY STR						
0		1.PK	0				STR						

Use the following procedures to configure the EAM checklist feature:

- Enabling or Disabling the EAM Checklist [page 136]
- Enabling or Disabling Manual Defect Recording [page 137]

3.2.13.1 Enabling or Disabling the EAM Checklist

Context

The EAM Checklist feature is called *EAM_CHECKLIST*. By default, the feature is not enabled.

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

Procedure

1. Navigate to *Component Assignments*. Select your application in the *Mobile Application Filter*. Click the application link in the *Search Result* table.

The Application Assignment Definitions page displays.

2. Click the *Change* button. Find the *EAM_CHECKLIST* feature ID in the *MAINTENANCE_TECHNICIAN* user persona part of the table. Enable or disable the feature using the *Active Flag* checkbox.

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rap) (+ Australia Inter)			
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ooly Filters			
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		CALINE OF MICHINE	
		CA. COME. DATA	
		CA CREW WARRANT	
		TA SETURATE AND SERVE	
		LAR DROUGT	
			14
			0
		CA. INSPIRE INCOMPARE	

3. Save your changes.

If you've enabled the checklist feature, the inspection results display on a mobile device on the *Checklists* detail screen. Validation of all inspections results is done per limits set during configuration of inspection characteristics in the inspection plan. Once results on the mobile device are synced to the back end, the results and usage decision are updated. The EAM checklist is marked as complete on the mobile device.

- 4. Enable the dependency between a work order and a related inspection lot on the mobile device. Navigate to SAM2205_WORK_ORDER_GENERIC oMDO.
- 5. Select the Dependent Object tab. Find the WOHEADER objects in the <Source Tech. Entity Type> column.
- 6. Find the SAM<version>_INSPECTION_LOT object. Enable the feature using the Active checkbox.

3.2.13.2 Enabling or Disabling Manual Defect Recording

Context

The functionality for creating defects manually for a rejected inspection task result from the mobile device is enabled through the *Parameters* tab. The EAM checklist feature is enabled by default.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. The EAM checklist parameters are found in the *EAM_CHECKLIST* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the *ManualDefectRecording* parameter and click the *Change* button.

 Mobile Applie 	cation (Display Mode))											
Create 🗐 (Copy 🗑 Delete	Change											
General	Mobile Status Setting	Conversion Exit Setting	System	Components	Parameters	Client Globals	User Attributes	Applica	ation Perso	ona Feat	ures	Sync Group	s
Mobile App	olication Info												
Mobile Appl	ication: SAP_SERVICE	_ASSET_MANAGE		Release:									
Mobile App.	Desc.: SAP Service an	nd Asset Manager											
Application	Parameters												
Paramete	r List												
Ex Import	′Export ∽							Search	EAM				
RecNo	Parameter Grou	q		am. Name		Param. Value	9	∇	Scope	Dep. R	Ac	No Ch	Com
• 000000	0038 EAM_CHECKLIS	ST	Mar	nualDefectRecor	ding	Y			Applic	0000000	~	 Image: A start of the start of	

The parameters found in the *EAM_CHECKLIST* group work alongside the order type configuration to automatically create the defects upon results recording. When the parameter is enabled, the *Record Defct* button on a rejected inspection characteristic is available on the app. A technician can add defect details. The app creates a notification on the back end when the mobile device is synced for the default EAM defect notification type assigned to that order type.

- 3. Make your desired parameter association changes. Enable the parameter as follows:
 - Y: Select if work order types are not set up with automatic defect recording
 - N: Select if you've configured work order types set up with automatic defect recording
- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter is not overridden at runtime through synchronization processing.
- 5. Save your changes.

3.2.13.3 EAM Checklist Attachments

When enabling EAM on the SAM2305_DOCUMENT data filter, you can attach documents to inspection lots. And when taking readings in the SAP Service and Asset Manager mobile app, you can attach documents related to the inspection lots.

- 1. Select SAM2305_DOCUMENT in the oData Mobile Data Object List and navigate to the following:
 - Poperation > CREATE_MEDIA Data Segment DOCUMENT_SWITCH
 - Operation READ Data Segment DOCUMENT_SWITCH
- 2. Add new lines to the *Rule List* for *BDS* and *GOS*:
 - OBJECT_TYPE: BUS2045
 - OBJECTLINK: BUS2045

(i) Note

Ensure that both *BDS* and *GOS* are set to *Active*.

3. Add new lines to the *Rule List* for *DMS*:

- OBJECT_TYPE: BUS2045
- OBJECTLINK: QALS

O Note

Ensure that both DMS is set to Active.

- 4. Navigate to Operation READ Standard Filter DOC_LINK_OBJ
- 5. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: QALS
- 6. Enable the active flag
- 7. Navigate to Operation READ Standard Filter CLASSNAME
- 8. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: BUS2045
- 9. Enable the active flag.

3.2.13.3.1 SAM 2305 Inspection Lot

Context

Procedure

- 1. Select SAM2305_INSPECTION_LOT in the oData Mobile Data Object List and navigate to the Data Filter tab.
- 2. In the Defined Filters list, navigate to Operation READ Standard Filter ABS_DOC_TYPE
- 3. Set filter handler

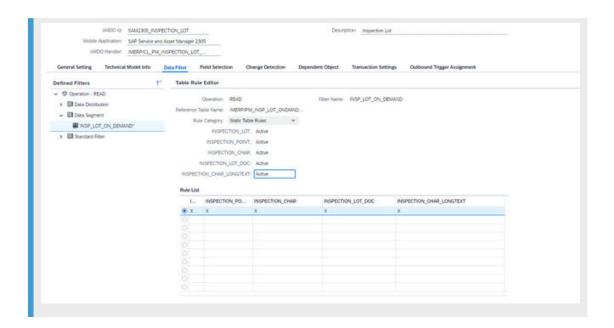
OMDO_ID=SAM2305_DOCUMENT&OPERATION=READ&DOF_NAME=DOCUMENT_SWITCH&OBJECTLINK S=BUS2045,QALS&OBJECT_TYPES=BUS2045 to Active.



- 4. Navigate to Deration READ Standard Filter DOC_CLASSNAME
- 5. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: BUS2045
- 6. Enable the active flag
- 7. Navigate to Deration READ Standard Filter DOC_CLASSTYPE
- 8. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: ▶ BO > Business Object Repository object
- 9. Enable the active flag
- 10. Navigate to Operation READ Standard Filter DOC_GOS_RELTYPE
- 11. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: ATTA > Has the Attachment
- 12. Enable the active flag
- 13. Add a new line to the *Rule List* and enter the following range value:
 - Sign: Inclusive
 - Option: =
 - Low Value: URL > Has Internet Link
- 14. Enable the active flag
- 15. Enable dependency between the inspection lot and the related document on the mobile device
- 16. Navigate to the *Dependent Object* tab. Find *INSPECTIONLOTDOC* objects in the *<Source Tech. Entity Type>* column. Scroll the page to find the *SAM2305_DOCUMENT* object. Ensure it is marked as *Active*.
- 17. Insert new lines in the Dependent Object Keys tab:
 - 1. Source oMDO Field Name: OBJECT_KEY Dependent Object Key Fieldname: OBJECT_KEY
- 18. Insert new lines in the Origin Object Keys tab:
 - 1. Field name: OBJECT_KEY
 - 2. Field name: DOC_OBJ_ID

O Note

As of 2305 version, the SAP Service and Asset Manager introduces an additional feature concerning long texts for master inspection characteristics: a new *MasterInspectionCharLongText* entity is created as an *InspectionLot* sub-entity. Set the flag to *Insp_Lot_On_Demand* to enable reading the long text of the main inspection characteristic. By default, it is active.



3.2.14 Configuring the Creation of Technical Objects from a Template

You can create Equipment and Functional Locations from the SAP Service and Asset Manager application in a similar way to executing transactions IEO1 and ILO1 from the SAP Service and Asset Manager GUI.

Context

A template is required when you create equipment, but it's optional when you create a functional location. Any existing equipment or functional location can be used as a template. It's possible to copy the classifications, measuring points, business partners, documents, install location (equipment only), and notes from the template. The description, maintenance plant, start date, manufacturer, date of manufacturer, model number, serial number, and room are populated from the template object and you can overwrite them. It's possible to update equipment and functional location before syncing.

Procedure

- 1. To access the ConfigPanel using a direct transaction code shortcut, enter /n/syclo/configpanel.
- 2. Activate CA_CREATE_TECH_OBJECT for MAINTENANCE_TECHNICIAN Persona in the *Component Assignments*.

User Persona:	s oMDO Assignment xC	hange Object Assignmen	t)
 Apply Fi 	lters				
User Persona:		App. Feature Id:	CA_CREATE	TECH_OBJ	ECT 🗸
eature Assig	gnment				
Display Option					
	User Persona	App. Featu	re Id	In-Scope	Active Flag
MAINT	ENANCE_TECHNICIAN	CA_CREATE_TEC	H_OBJECT	\checkmark	

3. Add a rule to EQUIP_TEMPLATE filter in the SAM<version>_EQUIP_TEMPLATE oMDO in the oData Mobile Data Object Configuration.

oMDO Id;	SAM _EQU	IP_TEMPLATE	D	escription	Equipment Temp	olate		
Mobile Application:	SAP Service and	d Asset Manager]					
oMDO Handler:	/MERP/CL_PM_	EQUI_TEMPLATE_O]					
General Setting	Technical Mod	del Info Data Filter	Field Sele	ction	Change Detection	Dependent Ob	oject	Transaction Settings
Defined Filters	↑~	Table Rule Editor						
✓		Operation:	READ			Filter Name:	EQUIP	P_TEMPLATE
V Standard		Reference Table Name:	/MERP/P	M_EQUI_	TEMP_ENTITY			
P4 EQUI	P_TEMPLATE*	Rule Category:	Static Ta	ble Rules	~			
		Equip	Category:	Machines				
		E	quipment:	10011941				
		Rule List						
		EquipCategory		Equipmer	t			
		• M		10011941				

The following step is optional:

4. Add a rule to FLOC_TEMPLATE filter in SAM<version>_FLOC_TEMPLATE oMDO in the oData Mobile Data Object Configuration.

oMDO Id:	SAM _FLO	C_TEMPLA	TE	De	escription	Functional Location	on Template		
Mobile Application:	SAP Service an	d Asset Ma	inager]					
oMDO Handler:	/MERP/CL_PM	_FLOC_TEM	MPLATE_O]					
General Setting	Technical Mo	del Info	Data Filter	Field Selec	tion	Change Detection	Dependent O	bject	Transaction Settings
Defined Filters	t -	Table	Rule Editor						
and and the second			Operation:		READ			FLOC_TEMPLATE	
		Referen	ce Table Name:	/MERP/PM	_FLOC_	TEMP_FILTER			
FLOC	_TEMPLATE*	Rule Category: Fu		Static Table Rules 🗸 🗸					
				InctLocCat.: Linear functional location]		
			Fun	ctional loc.:	0001-A	4-001			
		Rule	List						
		F	unctLocCat.	Fi	unctional	loc.			
		• L		0	001-AA-0	01			

5. Save your changes.

3.2.14.1 App Customization with Additional Fields

The PROPERTY_FLAG filter in the technical objects, either *Equipment* or *Functional Location* oMDO contains the list of properties available to edit during the creation of a technical object. The properties, which are active by default correspond to the default fields in the applications technical object create page, see the example.

S	AP Service an	d Asset Manager Equipment (1	,033)	+	Filte
S	earch				
ŋ	Pump 00554 Hamburg (10 10000000	88 1000 00), MANTWRK1		Installed	
ŋ	Pump I - 55 Hamburg (1 10000001	Cancel Add Equipm	ent Save	rior equipt	
1)	Pump II ed Hamburg (1	Create From	Template >	rior equipt	
	10000002	Category	None >		
Ŋ	BOILER INI Hamburg (1	Template	None >	rior equipt	
19	FORKLIFT	Location Location		rior equipt	
	Hamburg (1 10000005	Use current Use map Re	emove		
ŋ	PUMPELEC Hamburg (1 10000006	ID LOCAL_E00001		rior equipt	
ŋ	Pump I - 10 Hamburg (1	Description Equipment example		rior equipt	
	10000209	Maintenance Plant	None >		
1)	Pump II - 1	Functional Location	None >	Installed	
Hamburg (1	Hamburg (1 10000210	Superior Equipment	None		

PM Mon Jun 6	000		ମ 🗢 100% 🗖
SAP Service and Asset N	Manager Functional Location (834)	Ð	Filter +
Search			
- Hamburg (1000) FLOC-SVB-AY-18			Created >
- Hamburg (1 ASEM-LOC-A	Add Functional Location	Save	Created >
- Create F	rom	None >	Created >
Hamburg (1 TLOU-QK0-A, Category	y	None >	
- Hamburg (1 Location FLOC-PSR-PI Location	1		Created >
- Use c Hamburg (1 FLOC-CUS-A	urrent Use map Remove		Created >
- Hamburg (1 FLOC-TUN-O	e Index	None >	Created >
- Descript FLOC-SVB-A' Function	ion nal Location example		Created >
- Mainten	ance Plant	None >	Created >
Hamburg (1 Superior FLOC-SVB-A	r FLOC	None >	
Start Da		lun 6 2022	

If a property is inactive, the value from the template or a previously created technical object is written to the newly created object. Updating the property to active in the filter doesn't change the create page of the application, a customization would be required in the application, too.

EQUIPDESC corresponds to the *Description* field in the *Equipment* create page of the app.

oMDO Id:	SAM _E	EQUIPMENT		Description:	Equipment			
Mobile Application:	SAP Service	and Asset Manager						
oMDO Handler:	/MERP/CL_	PM_EQUIPMENT_OD : o						
General Setting	Technical Mo	del Info Data Filter	Field Selection	Change Dete	ction Depender	nt Object	Transaction Setting	
Defined Filters	↑-	Table Rule Editor						
 Operation - Cl Data Segminiary 		Operation:	CREATE		Filter Narr	e: PROF	PROPERTY_FLAG	
PROPER		Reference Table Name:	/MERP/PM_EQUI_		L			
> 😚 Operation - RI	EAD	Rule Category:	Static Table Rules	~				
		ADDRESSNUM]				
		BUSINESSAREA	Inactive]				
		CONSTMONTH	Active]				
		CONSTYEAR	Active]				
		COSTCENTER	Inactive]				
		EQUIPCATEGORY	Active]				
		EQUIPDESC	Active					

FUNCLOCDESC corresponds to Description field in the Functional Location create page of the app.

oMDO Id:	SAM _F	UNCLOC				Description:	Functio	onal Location		
Mobile Application:	SAP Service	and Asse	t Manager							
oMDO Handler:	/MERP/CL_I	PM_FUNC	LOC_OD : oM							
General Setting	Technical Mo	del Info	Data Filter	Field Sele	ection	Change Dete	ection	Dependent (Object	Transaction Settings
Defined Filters	↑-	Table	Rule Editor							
 Operation - Cl Data Segment 		Refere	Operation: nce Table Name:		A FLOC	PROPERTY F	3	Filter Name:	PROP	ERTY_FLAG
PROPER Operation - Ri		Rule Category:		Static Tab						
 Data Distrib Data Segmi Standard Fi 	ent		AUTHORIZATIC BUSIN	NGROUP: ESSAREA:	Inactive					
> 📑 Obsolete Fi	lter		COMP	SPROFILE:	Inactive					
				NSTYEAR:						
				ALLOWED:						
				LOCDESC:						

3.2.15 Auto-Resize Images with a Configured Maximum Size

You can configure the maximum image size, which is allowed for uploading images from the application. Uploaded images exceeding the size limit will be resized automatically.

Context

O Note

Decreased size of the images will be less, but not necessarily equal to the configured maximum size.

See configuration steps as follows:

Procedure

1. On the Configuration Panel, go to Mobile Application Configuration.

Mobile Application Configuration				
General Info	oData Channel Integration Settings	Change Detection Settings		
Mobile Application Configuration	oData Service Assignment	EFI Assignment		
Defines basic information about mobile applications, such as release, description.	Assign standard oData Service to the mobile application. oData service model will be generated based on configuration	Enhancement Framework Implementation Trigger is assigned to Exchange Objects.		
Component Assignments	setting.	Exchange Object Configuration		
Define component assignment for user persona, features etc.	oData Model Configuration	Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile		
Geospatial Framework Settings	Mobile application oData Model definition for entity type, entity set, association, association set, navigation property etc	application.		
Geospatial Service Definitions	Data Mobile Data Object Configuration Data extraction and distribution loaic and rules are defined for configuration, master and transaction data.			
Define Geospatial Service Provider Information, Object Type Assignment etc.	Uata extraction and distribution logic and rules are defined for computation, master and transaction data.			
Transaction Management Setting	RFC Channel Integration Settings	Push Framework Settings		
Inbound Transaction Queue Definition	Mobile Data Object Configuration	Push Scenario Definition		
Define Inbound Transaction Queue Settings	Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Push scenarios can be defined to push data to mobile devices when qualified datasets changed in the backend.		
Data Staging Settings	BAPI Wrapper Configuration	Outbound Trigger Configuration		
Data Agent Definition	Agentry Integration BAPI Wrappers are assigned to Mobile Data Objects	Triggers to interface with external systems are defined.		
Define data store supplying agent settings.		Subscription Agent Definition		
Data Store Definition		Defines how subscription requests for backend system data are handled.		
Define staging data store settings, data storage, data agent assignment, schedule, mapping information etc.				
umme staging data store setungs, data storage, data agent assignment, schedute, mapping monnatori etc.				
System Configuration				
System Settings	Security Settings			
Technical Settings	Mobile Authorization Settings			

2. Select your mobile application, go to the *Parameters* tab and select the parameter *MAX_IMAGE_SIZE*.

Mobile Applications	Mobile Application (Display Mode)										
	Create Copy	The Delete	ge									
	General Mob	ile Status Setting Co	Conversion Exit Setting	System Components	Parameters C	lient Globa	ls User	Attributes	Appl	ication Persona Features Sync Groups		
	Mobile Application	on Info										
	Mobile Application:	SAP_SERVICE_ASSET_M	MANAGE	Release: 2310								
- 1991 - 1992	Mobile App. Desc.:	SAP Service and Asset Ma	danager 2310									
	Application Para	metors										
	Application Para	meters										
	Parameter List	nievers										
											Search: MAX	٩
	Parameter List		ime	Param. Value	Ÿ	Scope	Dep. R	Act	No Cha	Comment	Search: MAX	(9)
P_SERVICE_ASSET_MANAGER_2310	Parameter List (is Import/Export RecNo Pa	≥		Param, Value	y		Dep. R 00000000		No Cha	Comment Maximage tare in bytes for sploads.	Search: MAX	<u>(</u>
P_SERVICE_ASSET_MANAGER_2310	Parameter List (is Import/Export RecNo Pa	V Param. Na ramete V Param. Na IAGE_EDITOR MAX_IMAC			Ÿ					Max image size in bytes for uploads.	Search(MAX	(Q
P_SERVICE_ASSET_MANAGER_2310	Parameter List Cs Import/Export RecNo Pa C0000002IN	× aramete ∀ Param. Na IAGE_EDITOR MAX_MAG			Ÿ	Applic	00000000			Max image size in bytes for uploads.	Search: MAX) @
P_SERVICE_ASSET_MANAGER_2310	Parameter List Cs Import/Export RecNo Pr 00000002IV	V) aramede V Param. Nar MAGE_EDITOR MAX_IMAG	NGE_SIZE		Ÿ	Applic	00000000			Max image size in bytes for uploads.	Search: MAX	(@)
P_SERVICE_ASSET_MANAGER_2310	Parameter List C: ImportExport RecNo P/ © 0000002IV	V araméte V Param. Na IAGE_EDITOR MAX_IMAG	NGE_SIZE		Ÿ	Applic	00000000			Max image size in bytes for uploads. -1 = no auto-rester on image during upload	Search: MAX	
NP_SERVICE_ASSET_MANAGER_2310 3	Parameter List	V aramete V Param. Nar Arage_EDITOR MAX_IMAC	NGE_SIZE		Ŷ	Applic	00000000			Max image size in bytes for uploads.	Saardix MAX	(@
AP_SERVICE_ASSET_MANAGER_2710 5	Parameter List (***********************************	V aramée V Param. Na GAGE_EDITOR MAX_IMAC	KGE_SIZE		Ÿ	Applic	00000000			Max image size in bytes for uploads. -1 a no web-maler on mage during upload	Search: MAX	(4)
AP_SERVICE_ASSET_MANAGER_2310	Parameter List (***********************************	V aramete V Param. Nar Arage_EDITOR MAX_IMAC	KGE_SIZE		Ÿ	Applic	00000000			Max image ozerb bytes for spłoads. -1 = no auto-rester on image during upload	Search MAX	(0)

3. Enter *Change mode* and in the *Parameter Details* section add your preferred maximum image size as the *Parameter Value*.

ile Application (Change Mode)				
General Mobile Status Setting Conversion Exit Setting	System Components Parameter	Client Globals User Attributes Application Persona Features Sync Groups		😸 Save) 🗙 C
Mobile Application Info	System Components Parameter	Guen Guodais Oser Alliziones Application Personal Peakures Sync Groups		
Mobile Application: SAP_SERVICE_ASSET_MANAGE Mobile App. Desc.: SAP Service and Asset Manager 2310	Release: 2310			
Application Parameters				
Parameter List				
Add O Delete Belete All Calment Calme	Param, Value	V Score Den.R., Act., No.Cha., Comment	Search: MAX	<u> </u>
RecNo Paramete V Param. Name	Param. Value	V Scope Dep. R Act No Cha Comment		
0				
				•
0				
0		and the second sec		
Parameter Detail				
Parameter Detail				
Parameter Group:* IMAGE_EDITOR				
Param. Name:* MAX_IMAGE_SIZE		Param. Scope: Application 👻		
Param. Value: 1		Use Language Specific Value:		
Rule Id:		Vise Rule:		
Dependent Parameter Id:		v		
Dependent Parameter Group:				
Dependent Parameter Name: Dependent Parameter Value:				
Comment: Max image size in bytes for uplo	ark			
-1 = no auto-resize on image du				
Active Flag:				
No Runtime Change:				
DNote				
 Add value num 				
 Add value num 	Det III BY IE:	D .		
 The default value 	ue is -1 , in thi	s case the auto-resize feature is disabled.		
	_ ,			

4. Click Save to exit Change mode.

3.3 OData Channel Integration Settings Procedures

3.3.1 Copying an Object to the Customer Namespace

When you modify either an oData mobile data object or an exchange object, first make a copy of the object and place it in the customer namespace.

Context

The following procedure provides information on making a copy of an oData mobile data object (OMDO) or exchange object within SAP Mobile Add-On. In any of the procedures provided in this guide where an OMDO or an exchange object is copied, refer to this procedure for instructions. When you copy either an OMDO or an exchange object, you can roll back any changes you make to the application if necessary without changing the original objects.

Once you copy an OMDO and modify the object, you may adjust the oData model definition to reference the new OMDO. Similarly, when you copy and modify an exchange object, you may need to change the EFI trigger assignment to the new exchange object. These procedures are covered separately.

Procedure

- 1. Log into the ConfigPanel of the SAP Mobile Add-On.
- 2. Click either Exchange Object Configuration or oData Mobile Data Object Configuration from the home page.

The Object Detail panel opens.

(i) Note

Figures shown in this procedure are taken from the Exchange Object configuration page. Screens may look different when configuring an oData mobile data object. For either, the ability to copy is provided.

	Mobile Application Filt	er: SAP Asset Ma	nager	~						
xchange Object Detail (Display Mode)										
Create										
Technical Settings	Change Detection	Field Selection	Chan	ge Detection Condition Filter		Data Segment Settings	Linkage Set	tings	Push Settings	
Exchange Object:				Exch. Object Desc.:						
Mobile Application:										
Application Area:										
Reference Business Obje	ect:									
Exchange Table Name:				Exch. Table Desc.:						
Exchange Lock Object:			N	lo Exchange Table Update:						
Days To Keep History:	000									
Handler Setting										
ExchObject Handler:										
Collective Run Se	ettings									
Collective Run Mode:	Dynamic									
Activation Setting	1									
Active Flag:	Use In Linkage Process	ing Only:								
Administrative Inf	fo									
Created By:		Creation Time S	Stamp:	00.00.0000 00:00:00						
Last Changed By:		Changed Time S	Stamp:	00.00.0000 00:00:00						

- 3. Select the object to copy from the list of OMDOs or exchange objects and click *Copy*.
- 4. In the main object <ID> field, add a <Z> to the beginning of the object name.

Exchange Object De	tail (Create Mode)	l		
Technical Settings	Change Detection Fi	eld Selection	(Change Detection Condition Filter
* Exchange Object:	Z_DEMO_CLASSCHAR	ACTERISTIC_0	CPY	* Exch. Object Desc.:
* Mobile Application:	Z - oData offline evaluat	ion POC	~	
* Application Area:	Plant maintenance	~	•	
Reference Business Object	t: 🗇			
Exchange Table Name:	ZSYCLO_KSML_EX	D D		Exch. Table Desc.:
Exchange Lock Object:		- D		No Exchange Table Update:
Days To Keep History:	180			
Handler Setting				

5. Click Save to save the object copy.

A copy of the original object is created in the customer namespace. Now you can modify the object, with the original object as a back-up for rollback purposes, if necessary.

3.3.2 Working with oData MDO Filter Rules

Filter rules specify a single field within the database tables from which data is retrieved. Filter rules also specify under which conditions records are included in the operation based on the value of the field.

Data filters are part of the configuration of an oMDO. If you make configuration changes to SAP Service and Asset Manager, you may need to adjust the rules for one or more of the oMDO filters.

Many of the filters in SAP Service and Asset Manager either do not contain active rules or contain rules that you can adjust. A filter only effects the synchronization behavior when it has one or more active rules.

The following procedure instructs you on how to adjust a filter using the ConfigPanel.

3.3.2.1 Changing oData MDO Filter Rules

Many of the common configuration changes made for an SAP Service and Asset Manager implementation involve modifying or adding one or more filter rules in an oData MDO.

Context

In SAP S/4HANA, each user is assigned a role based profile with authorization permissions on viewable data and available activities. For example, a user working in one plant should not be able to view data for a different

plant. When business activities performed by a user are mobilized through the mobile application, the ability to extend the same restrictions to the mobile application is necessary. Data filter rules provide the function to restrict data access for mobile applications.

Use the following procedure to modify a data filter rule for an oMDO. The changes you make to the settings of a given rule vary depending on your mobile application implementation requirements. Subsequent procedures in the *Configuration Guide* refer to this procedure and provide detailed values and settings for filter rules involved in the specific change.

Procedure

- 1. Access the ConfigPanel. See Accessing the SAP Mobile Add-On for SAP Configuration Panel [page 14] for information.
- 2. From the ConfigPanel Home page, click the oData Mobile Data Object Configuration link.
- 3. At the top of the *oData Mobile Data Object Configuration* page display, in the *Mobile Application Filter* field, choose your mobile application from the dropdown menu. Choosing your mobile application is not a necessary step, but it eliminates objects that are not part of your mobile application from the object list.
- 4. Click the *Data Filter* tab.
- 5. Expand the oData Mobile Data Object List tree so you can see all of the oData mobile objects.
- 6. Select the oData mobile data object that requires filter modification from the list.

The current rule filter settings are displayed in the *Rule Editor* section. All existing rules for the filter are displayed in the *Rule List* table.

7. To add a new rule, edit an existing rule, or delete a rule from the filter, click Change.

Many of the fields in the rule editor become editable, and the buttons Add Row and Delete Row appear.

- 8. Set or modify any editable fields desired according to your mobile application needs. For a detailed description of all oData mobile data object fields, see the *OData Channel Integration Settings* topic and and the related subtopics in the section.
- 9. Set the *Active Flag* to <True> for each added or edited field before saving changes. Inactive filter rules have no effect on synchronization processing.
- 10. Click Save to apply your changes.

3.3.3 Work Order Distribution by Order Type Overview

In the default configuration of SAP Service and Asset Manager, work orders are distributed to technicians based on basic parameters. Your site may wish to distribute work orders to users based on the order type.

By default, all Plant Maintenance specific order types are included in the synchronization logic for the SAP Service and Asset Manager application.

In many environments, one or more order types are added to SAP Mobile Add-On specifically for work orders that are distributed to technicians. The added order types indicate that SAP Service and Asset Manager will

only download certain specified work orders. To support this distribution method, change the data filter rules of the OMDOs involved in work order synchronization. The OMDOs include:

- SAM2310_ORDER_TYPE
- SAM2310_WORK_ORDER_GENERIC

3.3.3.1 Configuring Work Order Distribution by Work Order Type

Creating rules based on work order types affects synchronization processing and work order downloads to the mobile devices of your users.

Prerequisites

Address the following before performing the procedure:

- The order types for work orders that are downloaded to technicians using the SAP Service and Asset Manager application are already determined.
- The person performing the procedure has access to the Config Panel and permissions to change settings.

Context

The following procedure modifies the synchronizing behavior of the SAP Service and Asset Manager application so only work orders with a given order type or types are downloaded to the client. In the procedure, you'll change the ORDER_TYPE filter in the OMDOs involved in work order synchronization. Specifically, you add rules to the filter in each OMDO to include only the desired work order types. You add a rule for each order type to include.

If you don't create a rule for a work order type, then those work order types are excluded from the work order download synchronization processing. If the work orders are excluded from the synchronization processing, then the work orders aren't present on the mobile clients of your users.

Procedure

- 1. From the Config Panel home page, click the *OData Mobile Data Object Configuration* link, then click the *Data Filter* tab. Be sure to have your desired mobile application chosen in the *Mobile Application Filter* field at the top of the page.
- 2. Expand the OData Mobile Data Object by Mobile App list on the left and click **SAM2310_ORDER_TYPE**.
- 3. Expand the Standard Filter in the Defined Filters pane, and click the ORDER_TYPE filter.
- 4. View the rule list for the filter, which is empty in the default configuration of SAP Service and Asset Manager. Click the *Change* button.

- 5. Create a rule for each order type included in the work order distribution to the SAP Service and Asset Manager technicians. The settings for the rule are as follows:
 - DOF Rule Type: Static Value in Range Format
 - Sign: Inclusive
 - Option: =
 - Low Value: The desired order type

For more details on adding or editing filter rules, see Changing oData MDO Filter Rules [page 149].

- 6. Save your changes once you're finished.
- 7. Find and click the **SAM2310_WORK_ORDER_GENERIC** OData mobile data object on the list on the left.
- 8. Expand the Defined Filters pane, and click the ORDER_TYPE filter.
- 9. View the rule list for the filter, which is empty in the default configuration of SAP Service and Asset Manager. Click the *Change* button.
- 10. Create a rule for each order type included in the work order distribution to the SAP Service and Asset Manager technicians, as you did with the previous OMDO filter. The settings for the rule are as follows:
 - DOF Rule Type: Static Value in Range Format
 - Sign: Inclusive
 - Option: =
 - Low Value: The desired order type

11. Save the changes.

Results

After you finish the procedure, work orders are downloaded by the SAP Service and Asset Manager application only if their work order type is set to a type for which a filter rule was created. Other work order types aren't retrieved by the application.

3.3.4 Business Object Distribution by Assignment Model

Business object distribution defines the data that needs to be downloaded to the mobile device based on the resource planning of technicians for different business objects, such as work order and notification. You can use this configuration to define which technicians has to complete which activities on the mobile device.

Implementation environments in different business industries or business types may use a different business object model from the default to determine the proper technician assignment for a business object such work order and notification.

3.3.4.1 Work Order Assignment Type Options

By default, the SAP Service and Asset Manager application determines the assignment of a work order using the personnel number of the work order header. However, you can make minor configuration changes to support several work assignment models.

For some customers using Assignment Type 3 for work orders, viewing a list of suboperations is more important than viewing a list of operations. Work order headers are still visible. You can configure your preference using the ConfigPanel for SAP Service and Asset Manager.

For assignment types 2 and 6, some customers prefer the ability to view all operations rather than all work orders. Work order headers are still visible. You can configure your preference using the ConfigPanel for SAP Service and Asset Manager.

Implementation environments in different business industries or business types may use a different business model from the default to determine the proper technician assignment for a work order.

The following assignment types are supported with minor configuration changes:

(i) Note

The SAP HR module is needed for Assignment Types 1–4.

- Assignment Type 1: Header-level person responsible for the work order (default, no change required)
- Assignment Type 2: Operation-level personnel number of the work order
- Assignment Type 3: Sub-operation-level personnel number of the work order
- Assignment Type 4: Capacity requirement personnel assignment
- Assignment Type 5: Header-level planner group* Prerequisite: Mobile user has to have the user parameter *IHG* set up in the user profile parameter.
- Assignment Type 6: Operation- or task-level work center* Prerequisite: Mobile user has to have the user parameter *AGR* set up in the user profile parameter.
- Assignment Type 7: Header-level business partner*
- Assignment Type 8: Header-level of the work center* Prerequisite: Mobile user has to have the user parameter VAP set up in the user profile parameter.
- Assignment Type A: Multi resource scheduling (MRS)
- Assignment Type Z: Other (custom BAdl option)*

* These assignment types don't require a technician to have a personnel number.

Perform the following steps to change the assignment type used in a deployment:

- 1. On the ConfigPanel home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. In the OData Mobile Data Object List select **SAM2310_WORK_ORDER_GENERIC**, and then the Data Filter tab.
- 3. Expand the Defined Filters list as follows; Departion READ Data Distribution and click WO_ASSIGNMENT_TYPE. Click the Change button.
- 4. Set *Low Value* with the desired assignment type as defined by the assignment type model.
- 5. Save your changes.



- If you are configuring an operation level assignment type, you must update the *OPER_EXCL_SYST_STAT* filter with the *I0009* - *CNF:Confirmed* value. However, remove the value if you're configuring a header level assignment type.
- Under *Rule List*, you can set any number of Assignment Types for which the objects will be downloaded from the back end. However, on the client side **only one** of them will be considered by standard, namely the first one on top of the list, which has the Active Flag enabled (see image below). The business logic of this one Assignment Type will be applied to all downloaded objects.
 - Also note that in Supervisor Mode (supported Assignment Types: 6 and 8), you may not see the complete list of objects downloaded from the back end due to filtering. For more information, see Work Order Assignment Type Configuration [page 167].

Defined Filters	Rule Editor				
 Peration - CREATE Operation - READ Eata Distribution 	Operation: Object Name:		RE OMDO DISTR STR	Filter Name: Reference Field Name:	WO_ASSIGNMENT_TYPE WO_ASGMNT_TYPE
译 COMP_CODE 译 CO_AREA	Data Filter Rule Key:	SAM2405_V	VORK_ORDER_GENERIC.RI	EAD.WO_ASSIGNMENT_TYPE	
F MAINT_OBJ_LOCATION F MAINT_PLANT	Filter Rule Type: Select Parame		Parameter	~	
译 MAIN_WORK_CENTER* 译 ORDER_CATG* 译 ORDER_TYPE* 译 PARTNER_FUNC_ASSIGN 译 PARTNER_ID	Parameter Id: /SM Active Flag: 🗸	/IERP/PM_WO	DISTMOE Description:	Plant Maintenance - Work Order Distribution	i Model
PLANNER_GROUP*	Rule List				
PLANT*		Rule Type RANGE	Rule Value		Active Flag
P PM_PHASE*		USERPARAM	I /SMERP/PM_WO_DISTMC	D	
WO_ASSIGNMENT_TYPE* > Image: Data Segment > Image: Security > Image: Standard Filter > Image: Standard Filter > Image: Standard Filter					

3.3.4.2 Notification Assignment Options

By default, the SAP Service and Asset Manager application determines the assignment of a notification associated with the notification header. However, you can make minor configuration changes to support several other assignment models for the notification object.

The following assignment types are supported for the notification object:

O Note

The SAP HR module is required for Assignment Type 1 and Assignment Type 2.

- Assignment Type 1: Header-level person responsible for the notification assignment (default, no change required)
- Assignment Type 2: Task-level personnel number of the notification assignment
- Assignment Type 3: Header-level planner group* Prerequisite: Mobile user has to have the user parameter *IHG* set up in the user profile parameter.
- Assignment Type 4: Header-level business partner*
- Assignment Type 5: Header-level of the work center* Prerequisite: Mobile user has to have the user parameter *AGR* set up in the user profile parameter.

- Assignment Type D: Dependent Queue
- By default, this assignment is based on the technician's notification assignment dependent collection*.
- Assignment Type Z: Other (custom BAdl option)*

* These assignment types don't require a technician to have a personnel number.

Perform the following steps to change the assignment type used in a deployment:

- 1. On the ConfigPanel home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. In the OData Mobile Data Object List select **SAM2310_NOTIFICATION_GENERIC**, and then the Data Filter tab.
- 3. Expand the Defined Filters list as follows; Departion READ Data Distribution and click NOTIF_ASSIGNMENT_TYPE. Click the Change button.
- 4. Set *Low Value* with the desired assignment type as defined by the assignment type model.
- 5. Save your changes.

O Note

Please note that under *Rule List*, you can set any number of Assignment Types for which the objects will be downloaded from the back end. However, on the client side **only one** of them will be considered by standard, namely the first one on top of the list, which has the Active Flag enabled (see image below). The business logic of this one Assignment Type will be applied to all downloaded objects.

Defined Filters	Rule Editor					
Poperation - CREATE Operation - DELETE Operation - DELETE Operation - READ Implement Distribution	Operation: Object Name:	READ /MERP/COR	E_OMDO_DISTR_STR	Filter Name: Reference Field Name:	NOTIF_ASSIGNMENT	-
The Date Completion*	Data Filter Rule Key: Filter Rule Type:	SAM2405_N User Profile	OTIFICATION_GENERIC.READ.N Parameter ~	IOTIF_ASSIGNMENT_TYPE		
译 EMPLOYEE_ID 译 EQUIPMENT 译 FUNC_LOC 译 MAINT_OBJ_LOCATION 译 MAINT_PLANT F NOTIF_ASSIGNMENT_TYPE *	Select Parame Parameter Id: //SM Active Flag: 🗸	eter ERP/PM_NO_	DISTMOD Description: Plan	t Maintenance - Notification Distributior	Model	
VOTIF_EXCL_SYST_STAT*	Rule List					
VOTIF_INCL_SYST_STAT	Rule No. F	Rule Type	Rule Value		Active Flag	
NOTIF_INCL_USER_STAT	00001 U	JSERPARAM	/SMERP/PM_NO_DISTMOD		\checkmark	
P NOTIF_UDB_CATEGORY PARTNER_FUNC_ASSIGN PARTNER_FUNC_ASSIGN PARTNER_ID PLANGROUP PLANPLANT*	00002 F	RANGE	D			

3.3.5 Filtering Equipment Records by Equipment Status

A large set of records could affect performance on the SAP Asset Manager client. Therefore, you can employ more filtering based on the status of equipment.

By default, SAP Asset Manager filters records through a user-dependent rule based on the planning plant of the user.

To filter records on the status of equipment retrieved for the table stored on the SAP Asset Manager client, modify the **SAM2310_EQUIPMENT** OMDO. Specifically, in the following procedure, you will configure the *EQUI_INCL_SYS_STAT* filter with a rule that specifies which status or statuses to include. After you configure

the rule, only the equipment records with the specified statuses are retrieved by the application for download to the clients.

A common equipment status is *INST*. However, the INST status is only one example of many options. You can configure other filters, either with this example, or in place of it.

For your given SAP Asset Manager implementation, thoroughly review the equipment data stored in the database before deciding which filter rules to configure. After your equipment review, create the appropriate filters within the **SAM2310_EQUIPMENT** OMDO.

3.3.5.1 Configuring an Equipment Status Filter for an Equipment Table

Prerequisites

Address the following items before performing the procedure:

- Know the status or statuses that you are filtering on for equipment synchronization, as they are used in the procedure
- Have access to the ConfigPanel and permissions to change configuration settings

Context

Use the following procedure to create a filter rule for the OMDO, **SAM2310_EQUIPMENT**. Specifically, you are adding a rule to the filter *EQUI_INCL_SYST_STAT*. After you add the filter rule, only the equipment records that match the ones configured in the rule are downloaded to the SAP Asset Manager client.

Procedure

- 1. Navigate to ConfigPanel Home OData Mobile Data Object Configuration .
- 2. Select your application in the *Mobile Application Filter* field.

Selecting an application filters the *OData Mobile Data Object by Mobile App* choices in the left panel with only OMDOs available in your application.

- 3. View the new OMDO copy by selecting it in the OData Mobile Data Object by Mobile App list.
- 4. Select the Data Filter tab.
- 5. In the Defined Filters list, click the Departion READ Standard Filter EQUI_INCL_USER_STAT node.
- 6. Add a rule to the filter with the following configuration settings:
 - Filter Rule Type: Static Value in Range Format
 - Sign: Inclusive
 - Option: =

- Low Value: Equipment status to filter on
- Active Flag: Checked
- 7. Repeat the previous step to include additional statuses in the filter.
- 8. Save your changes.

Results

When you finish the procedure, the equipment records downloaded by the SAP Asset Manager application are filtered to only include records with the status or statuses configured in the filter rules.

Next Steps

You may need to filter equipment according to additional criteria. Test that the status filters created during this procedure are performing as expected before creating additional filters for the same data set. Regardless of additional changes, test the synchronization of the equipment data thoroughly after you modify the application.

3.3.6 Retrieving Additional Data for OData Mobile Data Objects

The default implementation of SAP Asset Manager includes the typical data values required by most users and at most implementation. However, it is a common requirement that additional values are retrieved and stored.

3.3.6.1 Adding New Retrievable Values for OData Mobile Data Objects

Prerequisites

Address the following before performing this procedure:

- Determine and note the field values as well as any table values you want to add, as well as which tables the desired fields reside in SAP Mobile Add-On
- You must have access to the ConfigPanel and permissions to change configuration settings within it

Context

Use the following procedure to add new fields to OData mobile data objects.

Procedure

- 1. Navigate to ConfigPanel Home OData Mobile Data Object Configuration . Select the desired OMDO from the list on the left of the current configuration page.
- 2. Click the *Field Selection* tab, then click the *Change* button.

The *Field Active* column is enabled.

				Save 🗙
* oMDO Id: SAM CATS_TIMESHEET		* Description: CATS Timesheet		
* Mobile Application: SAP Asset Manager				
* oMDO Handler: /MERP/CL_HR_CATS_TIMESHEET_OD : of				
General Setting Technical Model Info Data Filter Field Sel	ection Change Detection D	ependent Object Transaction Settings Outbound Trigger	Assignment	
d Selection Detail				Sort Options
			Search:	By Field Name
Field Catalog	Field Active	Field Description	Data Format	By Field Description
 Handler Method - READ* 				O By DDIC Sequence
 Table - CATSDB* 		CATS: Database Table for Time Sheet		
Field - ARBID	✓	Object ID	NUMC(8)	
Field - AWART	✓	Att /Absence type	CHAR(4)	
Field - BEGUZ	✓	Start time	TIMS(6)	
Field - BELNR	✓	Document no.	CHAR(10)	
Field - CATSHOURS	✓	Hours	QUAN(4.2.)	
Field - COUNTER		Counter	CHAR(12)	
Field - ENDUZ	✓	End time	TIMS(6)	
Field - KOKRS	✓	Controlling Area	CHAR(4)	
Field - LAEDA	×	Last Change	DATS(8)	
Field - LAETM	×	Changed At	TIMS(6)	
Field - LONGTEXT	v	Long text	CHAR(1)	
Field - LSTAR	×	Activity Type	CHAR(6)	
Field - LTXA1	×	Short Text	CHAR(40)	
Field - PERNR	v	Personnel Number	NUMC(8)	
Field - RAPLZL	✓	Counter	NUMC(8)	
Field - RAUFNR	 Image: A set of the set of the	Receiver order	CHAR(12)	
Field - RAUFPL	v	Opertn task list no.	NUMC(10)	

- 3. In the *Field Selection Detail* pane, expand the *Handler Method* and the *Table* to search for the fields that you wish to activate. Fields that are already active are marked with a check in the checkbox.
- 4. Check the fields that you wish to activate and uncheck any active fields you wish to deactivate. Save your changes when finished.

Results

After completing the procedure, one or more new values are retrieved as part of the data for the object. The new values are displayed, edited, searched on, or used in other manners on the mobile client.

In the example screenshot in the procedure, the OData mobile data object used is

SAM2310_CATS_TIMESHEET. To make other OMDO configuration changes to the object, navigate to the ConfigPanel home page, then click the *OData Model Configuration* link. On the left panel, find the corresponding *EntityType* to make any additional configuration changes. In this procedure example, the entity type is *CatsTimesheet*. See Setting up an OData Mobile Data Object [page 239] for more information.

3.3.7 Enabling or Disabling Follow-On Work Orders

By default, follow-on work orders are enabled in a new installation. You can configure if a follow-on link exists or doesn't exist at the time of a new work order creation.

(i) Note

Ensure that business function *Enterprise Asset Management Part 7 (LOG_EAM_CI_7)* is activated in the back end. See Creating Follow-On Orders for more details.

3.3.7.1 Enabling or Disabling a Follow-On Work Order

Context

Procedure

- 1. Access the ConfigPanel through SAP Mobile Add-On.
- 2. Click the OData Model Configuration link from the home page of the ConfigPanel.
- 3. Select and expand the *OData Model Entity Type List* at the left of the pane. Select and expand your application from the list.
- 4. Select MyWorkOrderHeader. Navigate to the Property List tab and click the Change button.
 - a. Delete the *ReferenceOrder* property by clicking the *Delete* button to disable.
 - b. Enable the *ReferenceOrder* property by clicking the *Add Property* button and adding the following:
 - Property Name: ReferenceOrder
 - OMDO Field Name: REFNR (select from a drop-down list)
 - Edm Type: Edm.String (select from a drop-down list)
 - Max Length: 12
 - Conversion Exit: ALPHA
- 5. Save your changes.
- 6. Click the OData Mobile Data Object Configuration link from the home page of the ConfigPanel.
- 7. Choose your mobile application from the dropdown menu at the top of the *OData Mobile Data Object Configuration* page display, in the *Mobile Application Filter* field. Choosing your mobile application isn't a necessary step, but it eliminates objects that aren't part of your mobile application from the object list.
- 8. Click the Field Selection tab.
- 9. Expand the OData Mobile Data Object List tree so you can see all of the OData mobile objects.
- 10. Select SAM2310_WORK_ORDER_GENERIC from the list. Click the Change button.

- 11. Expand the Table AUFK node, and then locate the REFNR field.
- 12. Enable or disable the field by selecting or deselecting the *Field Active* checkbox.
- 13. Save your changes.

3.3.8 Maintaining Customer Service Order Types

Prerequisites

Be sure that you have installed the Customer Service component. See the instructions in the Asset Manager Component Installation Guide for IOS for more information.

③ Note

Configuring Customer Service order types is optional and is required only if the Customer Service component is enabled.

Procedure

- 1. Access the ConfigPanel through SAP Mobile Add-On.
- 2. From the ConfigPanel Home page, click the OData Mobile Data Object Configuration link.
- 3. At the top of the *OData Mobile Data Object Configuration* page display, in the *Mobile Application Filter* field, choose your mobile application from the dropdown menu. Choosing your mobile application is not a necessary step, but it eliminates objects that are not part of your mobile application from the object list.
- 4. Click the Data Filter tab.
- 5. Expand the OData Mobile Data Object List tree so you can see all of the OData mobile objects.
- 6. Select SAM2310_WORK_ORDER_GENERIC from the list. Then select Data Filter tab Operation READ
 Data Distribution ORDER_TYPE

The current rule filter settings are displayed in the *Rule Editor* section. All existing rules for the filter are displayed in the *Rule List* table.

7. To activate the Customer Service order type, click *Change*.

Many of the fields in the rule editor become editable.

- 8. Set the Active Flag to True for the <Rule Value>/MERP/CL_PM_ORDER_TYPE_ORU?CS.
- 9. To apply your changes, click Save.

Results

The Customer Service order type is activated in the ConfigPanel.

3.3.9 Maintaining Customer Service Notification Types

Prerequisites

Be sure that you have installed the Customer Service component. See the instructions in the Asset Manager Component Installation Guide for IOS for more information.

(i) Note

Configuring Customer Service notification types is optional and is required only if the Customer Service component is enabled.

Procedure

- 1. Access the ConfigPanel through SAP Mobile Add-On.
- 2. From the ConfigPanel Home page, click the OData Mobile Data Object Configuration link.
- 3. At the top of the *OData Mobile Data Object Configuration* page display, in the *Mobile Application Filter* field, choose your mobile application from the dropdown menu. Choosing your mobile application is not a necessary step, but it eliminates objects that are not part of your mobile application from the object list.
- 4. Click the *Data Filter* tab.
- 5. Expand the OData Mobile Data Object List tree so you can see all of the OData mobile objects.
- 6. Select SAM2310_NOTIFICATION_GENERIC from the list. Then select Data Filter tab Operation READ
 Data Distribution NOTIF_TYPE

The current rule filter settings are displayed in the *Rule Editor* section. All existing rules for the filter are displayed in the *Rule List* table.

7. To activate the Customer Service order type, click *Change*.

Many of the fields in the rule editor become editable.

- 8. Set the Active Flag to True <Rule Value>/MERP/CL_PM_NOTIF_TYPE_ORU?CS.
- 9. To apply your changes, click Save.

Results

The Customer Service notification type is activated in the ConfigPanel.

3.3.10 Configuring Confirmation Posting Dates - Overview

You can use either the USE_USER_TIME_ZONE or the POSTING_DATE filter, found in the **SAM2310_PM_CONFIRMATION** OMDO, to configure confirmation posting dates. Note that you can enable only one filter at a time. If both filters are enabled, you'll get an error.

USE_USER_TIME_ZONE Filter

See the Configuring Confirmation Posting Date Using the USE_USER_TIME_ZONE Filter [page 163] procedure for detailed instructions.

When the SAP system and mobile users are in different time zones, use the USE_USER_TIME_ZONE filter to perform the time zone conversion. When the filter is active, the application uses the time zone of the mobile user in the back end system to convert the actual start date / time. It also converts the finish date / time received from the mobile client. The system time zone is the default setting. The User Time Zone filter is a back end only configuration.

(i) Note

To use the time zone handling functionality in confirmation, SAP system must be customised with time zone. If SAP system time zone isn't maintained and the *USE_USER_TIME_ZONE* filter is active in the **SAM2310_PM_CONFIRMATION** OMDO, posting of confirmation from SAP Service and Asset Manager raises an error.

POSTING_DATE Filter

See the Configuring Confirmation Posting Date Using the POSTING_DATE Filter [page 164] procedure for detailed instructions.

The *POSTING_DATE* filter overrides the confirmation posting date as system date. The default option uses the posting date from the mobile device. If you use the *POSTING_DATE* filter, you must also enable the *PostingDateFromUserOverride* parameter. The Posting Date filter is a combination of front end and back end configuration.

3.3.10.1 Configuring Confirmation Posting Date Using the USE_USER_TIME_ZONE Filter

Context

Use the following procedure if you're configuring the confirmation posting date using the *USE_USER_TIME_ZONE* filter.

Procedure

- 1. On the ConfigPanel Home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. Click on body oData Channel Integration Settings body oData Mobile Data Object Configuration 3.
- 3. In the OData Mobile Data Object List select SAM2310_PM_CONFIRMATION, and then the Data Filter tab.
- 4. Expand the Defined Filters list as follows: Operation CREATE Standard Filter
 USE_USER_TIME_ZONE Click the Change button.
- 5. Select the existing rule. Ensure the <Low Value> field is set to X True and is enabled:

Operation	CREATE		Filter Name:	USE_USER_	TIME_ZONE
Object Name	e: /SYCLO	/CORE_STR	Reference Field Name:	BOOLEAN	
ata Filter Rule Key	SAM	_PM_CONFIRMATION.CREATE	USE_USER_TIME_ZONE		
Filter Rule Type	e: Static Va	alue in Range Table Format	~		
nter Range	Value				
Sign: Incl	usive 🗸	Option: =	~		
	True 🗸				
High Value:	\sim				
Active Flag:					
Rule List					
Rule No.	Rule Type	Rule Value		Active Flag	
00001	RANGE	х		✓	
00001	TOTIOL	~			

6. Save your changes.

3.3.10.2 Configuring Confirmation Posting Date Using the POSTING_DATE Filter

Context

Use the following procedure if you're configuring the confirmation posting date using the *POSTING_DATE* filter.

Procedure

- 1. On the ConfigPanel Home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. Click on body oData Channel Integration Settings body oData Mobile Data Object Configuration 3.
- 3. In the OData Mobile Data Object List select SAM2310_PM_CONFIRMATION, and then the Data Filter tab.
- Expand the Defined Filters list as follows: Depration CREATE Standard Filter POSTING_DATE .
 Click the Change button.
- 5. Select the existing rule. Ensure the <Low Value> field is set to 1 and is enabled:
 - Default: 1 Date from Mobile Device without conversion
 - 2 User Time Zone Date (at the time of BAPI execution)
 - 3 System Time Zone Date (at the time of BAPI execution)

Rule Editor					
Operati	ion: CREATE	E	Filter Name:	POSTING_DA	ATE
Object Nar	me: /MERP/	PM_CONF_POSTING_DATE_S1	Reference Field Name:	CONF_POST	ING_DATE
Data Filter Rule K	ley: SAN	_PM_CONFIRMATION.CREATE	.POSTING_DATE		
Filter Rule Ty	pe: Static Va	alue in Range Table Format	\sim		
Enter Rang	e Value				
Sign: In	iclusive ~	Option: =	~		
Low Value: 1	- Date from M	obile Device without conversion	~		
High Value:			~		
Active Flag:					
Rule List					
Rule No.	Rule Type	Rule Value		Active Flag	
00001	RANGE	2		\checkmark	E

- 6. Save your changes.
- 7. Return to the Home page. Navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

- 8. Click the Change button.
- 9. Find and highlight the *PostingDateFromUserOverride* parameter, located in the *PMCONFIRMATION* parameter group. Set the parameter to one of the following:
 - N: (Default). If set to N, the confirmation posting date is automatically taken from the time zone set on the mobile client.
 - Y: If set to Y, the mobile client user can manually enter a date on the Confirmation screen in the app.

bile Application:	SAP_ASSET_MANAGER	Release:							
	SAP Asset Manager								
plication Para	ameters								
rameter List									
Import/Export >	7							Search	
RecNo		Param. Name	Param Value	Scope	Dep. RecNo	Active	No Change	Comment	
000000078	PARTNERFUNCTION	PersonelNumber	PE	Application		~	✓	Partner Type of Person Responsible	
000000079	PARTNERFUNCTION	SoldToParty	KU	Application	0000000000	 Image: A start of the start of	 Image: A start of the start of	Sold-to Party partner type	
000000080	PMCONFIRMATION	Enable	Y	Application	0000000001	 Image: A start of the start of	 Image: A start of the start of		
000000081	PMCONFIRMATION	LaborTimeMinutesInterval	15	Application	0000000000	V		Available duration for time entry in minutes. Valid settings are:	1. 5. 10
000000082	PMCONFIRMATION	PostingDateFromUserOverride	N	Application	0000000000	~	~	Y = Confirmation posting date will be allowed to override in	client
000000083	QMFORMULA	CO	ResultValue	Application	0000000000	V	~		
000000084	QMFORMULA	C5	UpperLimit	Application	0000000000	~	~		
000000085	QMFORMULA	C6	LowerLimit	Application	0000000000	~	~		
000000086	QMFORMULA	C7	TargetValue	Application	0000000000	~	v		
000000087	REASON	1	no_parts	Application	000000087	v	v		
Parameter Detail									
Parameter D	etail								
Param	eter Group: PMCONFIRMATION								
Par	am. Name: PostingDateFromUser	Override		Parar	n. Scope: App	lication			
Pa	ram. Value: N		Use La	nguage Spec	ific Value:				
Rule Io	t:		Use Rule:						
Dependent Pa	rameter Id:								
Dependent Param	eter Group:								
Dependent Param	eter Name:								
Dependent Param									
	Comment: Y = Confirmation posti	ng date will be allowed to override in client							
,	Active Flag:								
	ne Change: 🗹								

- 10. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter isn't overridden at runtime through synchronization processing.
- 11. Save your changes.

3.3.11 Configuring the Supervisor Module

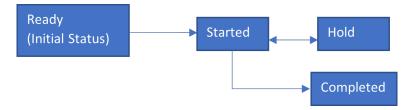
Use the following procedures to configure the supervisor module:

- Work Order Assignment Type Configuration [page 167]
- Supervisor Roles and Team Assignment Type Configuration [page 168]
- Enabling the Supervisor Approval Process for Work Orders [page 170]
- Mobile Application Parameter Settings for the Supervisor Mode [page 171]
- Mobile Application Status Settings for the Supervisor Mode [page 174]
- Rejection Reason Configuration [page 174]

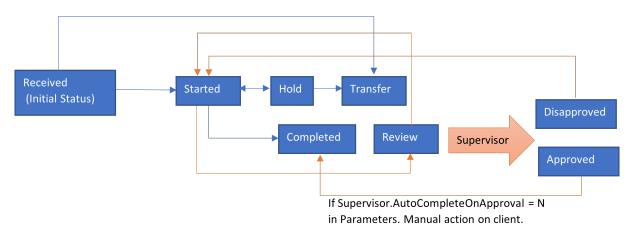
3.3.11.1 Work Order Operations State Machine for Maintenance Technician Persona

Technician Role:

• Phase model relevant operations (Supervisor mode is Active or Inactive)



• Non-phase model relevant operations (Supervisor mode is Active)

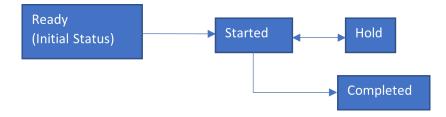


Note

Allowed status transitions are shown by red lines. Status transitions marked by red are only available when the PM_SUPERVISOR_MODE feature is active. All other transitions are available by default. The supervisor approves or disapproves the operation after it enters the Review mode by a technician.

Supervisor Role:

• Phase model relevant operations (Supervisor mode is Active or Inactive)



(i) Note

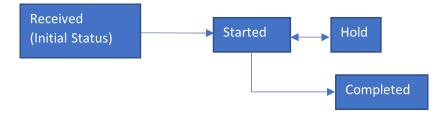
Here the user is a supervisor and is logged in as a supervisor. These state transitions are available even if the PM_SUPERVISOR_MODE feature is inactive. However, a scenario in which the supervisor configuration and authorization in the backend exists without the PM_SUPERVISOR_MODE feature active is unlikely.

• Non-phase model operations

O Note

Feature PM_SUPERVISOR_MODE is active. Allowed status transitions are shown by red lines.

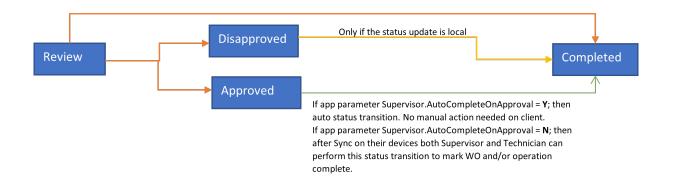
Working as a Technician:



(i) Note

Working as a Supervisor:

Here the supervisor is a technician with additional responsibilities.



3.3.11.2 Work Order Assignment Type Configuration

Context

The following assignment types are supported when using the Supervisor module:

Supported work order assignment types for the technician

• 1 - Header level person responsible

- 2 Operation/Task level personnel number
- 6 Operation/Task level work center
- 8 Header level work center
- Supported work order assignment types for the supervisor
 - 6 Operation/Task level work center
 - 8 Header level work center

Configure the assignment types for the work order OData MDO as follows:

O Note

One of the assignment types must be configured for the technician, while the other assignment type must be configured for the supervisor based on the supported work assignment types. Only the same level of assignment types is supported. In this, you can configure either header level assignments or operation level assignments, and not both.

Procedure

- 1. On the ConfigPanel home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. In the OData Mobile Data Object List select **SAM2310_WORK_ORDER_GENERIC**, and then the Data Filter tab.
- 3. Expand the Defined Filters list as follows; Departion READ Data Distribution and click WO_ASSIGNMENT_TYPE. Click the Change button.
- 4. Set *Low Value* with the desired assignment type as defined by the assignment type model.
- 5. Save your changes.

③ Note

If you're configuring an operation level assignment type, you must update the *OPER_EXCL_SYST_STAT* filter with the *IOOO9 - CNF: Confirmed* value. However, remove the value if you're configuring a header level assignment type.

3.3.11.3 Supervisor Roles and Team Assignment Type Configuration

Configure the data filters to define the Supervisor role and Team Assignment types for the OMDO. Your specific configuration is based on how the supervisor team is maintained in the back end.

For detailed instructions on how to work with data filters, see the Working with oData MDO Filter Rules [page 149] and Changing oData MDO Filter Rules [page 149] topics.

You're configuring the data filters found in the SAM2310_USER_ROLE OMDO.

In addition to configuring the data filters found in the **SAM2310_USER_ROLE** OMDO, you must manually maintain the team assignments for each user in the Mobile Administration and Monitoring Portal. Information on configuring user parameters is found at the following locations:

- Mobile Add-On for SAP S/4HANA Security Guide
 - Defining an Additional User Role Required for a Mobile Application User
 - Defining an Additional User Role Required for an OData Mobile Object Handler
- SAP Mobile Add-On Security Guide
 - Defining an Additional User Role Required for a Mobile Application User
 - Defining an Additional User Role Required for an OData Mobile Object Handler

WO_ASSIGNMENT_TYPE Data Filter

The following team assignment types are supported for downloading the supervisor team:

- 1 Work Center Assignment: Use when the team (technicians and supervisors) is maintained in the back end through the Work Center Maintenance transaction (CR02/CR03)
- **2 Organizational Structure Assignment:** Use when the team is maintained in the back end through the Org. Structure Assignment (PPOMA transaction).
- **3 User Attribute Assignment:** Use when the team isn't maintained in the back end through either the Work Center Maintenance or the Org. Structure Assignment transactions. Additional configuration and manual team assignments are needed.
- **4 Custom Assignment:** Use by the customer to define custom logic for downloading the teams. Customer logic is implemented in the BADI method /MERP/CA_OMDO_USER_ROLE_BADI GET_ASSIGNMENT_OTHERS.

POSITION_ROLE_TYPE Data Filter

The position role type filter defines the Position Org ID for the supervisor, and is maintained as part of the team configuration in the back end. The definition is needed to identify the mobile user with the Supervisor role. It's also needed for Team Assignment types 1 and 2.

WORKCENTER_ROLE_TYPE Data Filter

The work center role type filter is used for Team Assignment type 3. When using Team Assignment type 3, create a new filter rule with the following properties:

- Rule Type: Non-Static Table Rules
- Non-Static Table Rules: Mobile User Attribute
- User Attribute: WORKCENTER_ROLETYPE
- Active: Checked

3.3.11.4 Enabling the Supervisor Approval Process for Work Orders

Configure the data filters to define the Supervisor role and Team Assignment types for the OMDO. Your specific configuration is based on how the supervisor team is maintained in the back end.

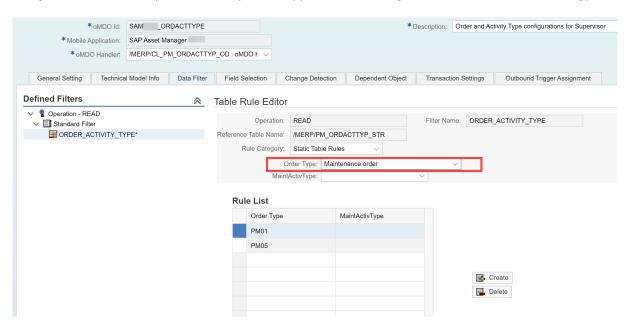
For detailed instructions on how to work with data filters, see the Working with oData MDO Filter Rules [page 149] and Changing oData MDO Filter Rules [page 149] topics.

You're configuring the ORDER_ACTIVITY_TYPE data filter found in the SAM2310_ORDACTTYPE OMDO.

If <Order Type> and <MaintActiv Type> fields are specified, the supervisor approval functionality is enabled for the combination:

*	oMDO Id: S	AM _OR	DACTTYPE				:	* Description:	Order a	nd Activity	Type configurations for	Supervisor
* Mobile A	pplication: S	AP Asset Ma	inager									
* oMD0	O Handler: //	ARP/CL_PI	M_ORDACTTY	′P_OD:oMDO⊦ ∨								
General Setting	Technical M	lodel Info	Data Filter	Field Selection	Change Det	ection	Dependent Object	Transact	ion Settin	gs (Outbound Trigger Assig	nment
Defined Filters			*	Table Rule Ed	itor							
✓ Soperation - RE ✓ Standard Filter				Operat	tion: READ			Filter Na	me: OR	RDER_ACT	TIVITY_TYPE	
I ORDER_A	CTIVITY_TYPE	*		Reference Table Na	me: /MERP/P	M_ORDA	CTTYP_STR					
				Rule Categ	ory: Static Tab	ole Rules	\sim					
					Order Type:	Mainten	ance order		\sim			
				1	MaintActivType:	Inspectio	on	\sim				
				Rule List								
				Order T	уре	Ma	aintActivType					
				PM01		00	1					
				PM05								
									I	👍 Create		
										🚽 Delete		
										Deiele		

If only <Order Type> is specified, the supervisor approval functionality is enabled for all orders of that type:



3.3.11.5 Mobile Application Parameter Settings for the Supervisor Mode

Context

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

(i) Note

As of the SAP Service and Asset Manager 2305 release, SAP introduces a new parameter for the supervisor that allows you to enable auto completion on approval. See the configuration procedure below.

The Supervisor feature is called PM_SUPERVISOR_MODE. By default, the feature is not enabled.

To configure the supervisor options for SAP Service and Asset Manager, use the *SUPERVISOR* parameter group and the following parameters within the group:

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters for the application.

2. The supervisor parameters are found in the *SUPERVISOR* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the parameter you want to configure and click the *Change* button.

Mo	bile Application:	SAP_SERVICE_ASSET_MANAGE		Release:							
Mo	bile App. Desc.:	SAP Service and Asset Manager									
Ар	plication Parar	neters									
Pa	rameter List										
R	x Import/Export										
Ľ	§ importexport	<u> </u>			Se	earch:	Supervi	sor			Q
Ŀ	RecNo	Parameter Group	7	Param. Name			Supervi Scope	sor Dep. R	Ac	No Ch	Com
C		_	7	Param. Name AssignmentModel		7	Scope	1		No Ch	
	RecNo	Parameter Group	7		Param. Value	7	Scope Applic	Dep. R			Com
	RecNo 0000000125	Parameter Group SUPERVISOR	7	AssignmentModel	Param. Value	7	Scope Applic Applic	Dep. R 0000000	 		Com

- 3. Make desired parameter changes as follows:
 - a. **AssignmentModel:** Set according to how your team is maintained and based on your team assignment type configuration:
 - For team assignment types 1 or 3, set the value to W or

 blank>.
 - For team assignment type 2, set the value to O.
 - b. **PromptForSignature:** Set the parameter to Y if signature capability is needed for supervisor approval.
 - c. **PromptForTime:** Set the parameter to *Y* if time capture is needed when the supervisor is executing the approval process.
 - d. AutoCompleteOnArppoval:
 - If set to *Y*, the supervisor can automatically complete a work order, operation, or sub-operation after approval on his device.
 - If set to *N*, the supervisor can only set the work order, operation, or sub-operation to the *Approved* status.

After synchronization on their devices, both the assigned technician and supervisor can set the status to *Completed* by manually changing the status on the device.

				erneters Client Globals User Attribu	nes region		and the average			
obile Application	n Info									
tole Application	SAP_SERVICE	ASSET_MANAGE	Release: 230							
shile App. Desc.	SAP Service an	d Asset Manager 2	305							
plication Param	neters									
rameter List										
S ImportExport	9									
RecNo	Parameter Group	p	V Param. Name	Param. Value	7.1	Scope	Dep. RecNo	A	No C.	Comment
0000000124	REMAINDER		NameLength	85		Application	0000000001	3	2	
0000000125	SUPERVISOR		AssignmentModel	w		Application	000000000	3	1	W or diank> = work center
0000000176	SUPERVISOR		AutoCompleteOnApproval	Υ.		Application	000000000			When set to 'Y', supervisor can auto complete work order, operation, sub-operation on approval on his/her device.
0000000126	SUPERVISOR		PromptForSignature	Y.		Application	000000000	3		
0000000127			PromptForTime	Y		Application	000000000	2		
0000000128			Emel	support@sep.com		Application	000000001	3	1	
0000000129			Facetime	1-800-677-7271		Application	000000001	9	2	
0000000130	SUPPORT		Phone	1-800-677-7271		Application	0000000001	3	2	
0000000131			CATSMinutesInterval	15		Application	000000000		2	Available duration interval for time entry in minutes. Valid settings are: 1, 5, 10, 15, 30
000000132	TIVESHEET		CompletionHours	8.0		Application	100000000		2	Number of hours to be entered per day in timesheets to be considered a completed work day
Parameter Detail										
Parameter De	etak									
Par	ameter Group	SUPERVISOR								
	Param. Name:	AutoCompleteOnA	leproval		30	Paran	n. Scope: Application			
	Param Willer	Y				Are Language Speci	tic Value:			
Rule	id.				Use Rule:					
Dependent	Parameter kt				3					
Dependent Par	ameter Group:									
Dependent Par	namenter Namer									
Dependent Pa										
	Comment.		pervisor can auto complete work order, op approval on his/her device.	ension.						
		Han (
	Active Flag									

4. Locate the parameter group USER_AUTHORIZATIONS. The parameter SupervisorRole is optional and is blank by default. You can configure it in one of the following ways:

O Note

If the *Parameter Value* field and the *Rule ID* fields are blank, and if no data filter rule is created, the authorization model is not used. The *UserRoles* entity set is then used to determine the authorization role.

- Set the Parameter Value field:
 - <blank>: The parameter is ignored
 - Y: Supervisor. If set, the current user has the role of Supervisor and the UserRoles entity set is ignored.
 - N: Technician. If set, the current user has the role of Technician and the UserRoles entity set is ignored.
- Use the authorization check rule /SMFND/CL_CORE_AUTH_CHECK_RU and corresponding authorization object to check if the user is a supervisor. If the parameter is enabled, it determines if the logged-in user is a supervisor or not in the application. Be sure to check the Use Rule box if you're using an authorization check rule.
- Use the position org ID defined in the *POSITION_ROLE_TYPE* data filter rule in the **SAM2310_USER_ROLE** OMDO. By default, the data filter rule is blank. See Supervisor Roles and Team Assignment Type Configuration [page 168] for information on creating a position role type data filter rule.
- 5. Save your changes.
- 6. Use the SAP GUI transaction SU3 to assign parameters depending on assignment types:
 - a. **VAP:** Main work center for maintenance tasks. Assign the work center of the user to this parameter when using team assignment type *1* or *3*.
 - b. /MERP/SUPVR_ORGID: Configure this parameter when using team assignment 2 as follows:
 - For a supervisor, configure with the org ID of the supervisor.
 - For a technician, configure with the org ID of the supervisor, which typically is the same as the org ID of the technician.

3.3.11.6 Mobile Application Status Settings for the Supervisor Mode

O Note

By default status settings for the supervisor mode aren't mapped to any back-end user or system status. For an example of how to configure a mapping status, see the Changing the Mapping of a Mobile Status to STARTED [page 99] procedure.

The following statuses to support the supervisor functionality are available at the work order and operation levels, depending on your configuration of the work order assignment type:

- **REVIEW:** Set by the technician after they've completed their work. The supervisor is then required to review the work.
- APPROVE and DISAPPROVE



ACCEPTED and **REJECTED**: Set by the field service technician if he is rejecting the work done on the work order or operation.

General Mobile	e Status Setting	Conversion Exit Setting	System Components	Parameters	Client Gl	obals l	User Attr
Mobile Application	n Info						
Mobile Application:	SAP SERVICE ASS	ET_MANAGER_2305	Release: 2305				

	SAP Service and Ass						
	SAP Service and Ass						
Mobile App. Desc.:	SAP Service and Ass						
Mobile App. Desc.: Mobile Status Map	SAP Service and Ass	set Manager 2305		Profile User Status	Initial Status	Skip Update	Disable

When a supervisor approves a work order or an operation, the status moves to COMPLETED.

3.3.11.7 Rejection Reason Configuration

The supervisor can reject an order or operation as part of the review process. If an order or operation is rejected, the supervisor must specify a rejection reason.

Configure the rejection reasons in the **SAM2205_REJECTION_REASON** OMDO, using the *REJECTION_REASON* data filter.

For information on how to work with data filters, see the Changing oData MDO Filter Rules [page 149] topic.

3.3.12 Configuring EAM Phase Model - Overview

The EAM Phase Model feature is called EAM_PHASE_MODEL.

O Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

O Note

This configuration is designed to work with SSAM with both enabled and unenabled order types. Phase model specific notifications are not supported in SSAM.

- 1. Work Order oMDO Configuration [page 175]
- 2. Notification Assignment Type Configuration [page 180]
- 3. Order Type oMDO Configuration [page 182] The process control code can limit a certain process state change based on the system state. It can also be applied to the execution phase, which prevents the user from moving the order or operation from one sub-phase to another.
- 4. Notification Type oMDO Configuration [page 183]
- 5. Work Order Partner Determination Procedure oMDO Configuration [page 185]
- 6. Notification Partner Determination oMDO Configuration [page 186]
- 7. Overall Status oMDO Configuration [page 187]
- 8. Mobile Status Mapping Configuration [page 189]
- 9. Mobile Status State Machine [page 190] The ConfigPanel shows you which PM mobile statuses are mapped to phase model statuses.
- 10. Persona and Feature Enablement [page 192]
- 11. Minor Emergency Work [page 195]
- 12. EAM Phase Control Code [page 196]

This new feature is added to support emergency or minor work in a reactive maintenance phase model. It helps to skip phases and issue a work order or notification when a technician is authorized to create those items.

3.3.12.1 Work Order oMDO Configuration

Context

Procedure

1. Maintain assignment type filter *WO_ASSIGNMENT_TYPE* with only the following assignment types:

	Oper	ation: REA	D		Filter Nam	e: WO_ASSIGNMENT_TYP
	Object N	lame: /ME	RP/CORE_OMDO_DISTR_STR		Reference Field Nam	e: WO_ASGMNT_TYPE
)ata	Filter Rule	e Key: SAM	12305_WORK_ORDER_GENERIC.RE	AD.WO_ASSIGNMENT	_TYPE	
	Filter Rule	Type: Stati	ic Value in Range Table Format	~		
Е	nter Ran	ge Value				
			0			
	Jight.	Inclusive	Option: =			
L	ow Value:	2 - Operati	on/Task Level Personnel No Assignm	ent		
	inda Valuar					
	igh Value:					
	igh Value: tive Flag:					
	-	0				
A	tive Flag:	Ø				
A	-	0				
A	ctive Flag:	Rule Type	Rule Value		Active Flag	
A	ctive Flag:		Rule Value		Active Flag	
A	ctive Flag: List Rule No.	Rule Type RANGE				
A	List Rule No.	Rule Type RANGE	1		0	
A	E List Rule No. 00001 00002	Rule Type RANGE USERPARAI	1 /SMERP/PM_WO_DISTMOD		0	

(i) Note

Since the phase model could be configured for assignment type 2 and 6, the non-phase model also works for only those assignment types.

2. Set filter handler /MERP/CL_PM_ORDER_TYPE_ORU?PM to active, which returns order types that have overall status profile assigned and those which are not.

Rul	e Editor				
	Oper	ation: RE	AD	Filter Name:	ORDER_TYPE
	Object N	lame: AU	FK	Reference Field Name:	AUART
ata	Filter Rule	Key: SA	M2305_WORK_ORDER_GENERIC.READ.ORDE	R_TYPE	
	Filter Rule	Type: Filt	er Handler 🗸 🗸 🗸		
S	elect Filt	er Handle	r		
Rule	e List				
	Rule No.	Rule Type	Rule Value	Active Flag	
۲	00001	HANDLER	/MERP/CL_PM_ORDER_TYPE_ORU?PM	8	
	00003	HANDLER	/MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM	0	
0	00000				
000	00004		/MERP/CL_PM_ORDER_TYPE_ORU?CS	O	
000			/MERP/CL_PM_ORDER_TYPE_ORU?CS	O	

O Note

As part of 2210 and previous release, this feature was disabled, however, it can now be active to fetch all PM order types, that is, phase model related and non-related.

3. Set ENABLE_PHASE_MODEL to active.

Rule	Editor					
	Oper		EAD		Filter Name:	ENABLE_PHASE_MODEL
	Object N	Name: /	SYCLO/CORE_STR		Reference Field Name:	BOOLEAN
Data	Filter Rule	e Key: S	AM2305_WORK_ORDER_GENERIC.RE	AD.ENABLE_PHA	SE_MODEL	
F	Filter Rule	Type: S	tatic Value in Range Table Format	~		
Er	nter Ran	ge Value	r			
	Sign:	Inclusiv	e Option: =			
L	w Value:	X - True				
H	gh Value;					
Ac	tive Flag:					
Rule	List					
	Rule No.	Rule Typ	e Rule Value		Active Flag	
•	00001	RANGE	х		63	
0						
0000						

Activate the features in the Component assignments section of the configuration for the Maintenance Technician persona.

Rele	ase: 2305	Mobil	e App, Desc	SAP Service and Ass		********		20
Us	er Personas	oMDO Assignment	xChange	Object Assignment	Push	Scenario Assignment		
~ #	pply Filters							
	User Persona:	MAINTENANCE_TECHNIC	a 👻	App. Feat	ure ld:	EAM_PHASE_MODEL		~
eatu	e Assignment							
Disp	alay Option 🗸							
Disp		User Persona		Арр.	Feature	t Id	In-Scope	Active Flag
	olay Option 🗸		CIAN	App. EAM_Pł			In-Scope	Active Flag
0	olay Option 🗸	User Persona	CIAN					
0	olay Option 🗸	User Persona	CIAN					
	olay Option 🗸	User Persona	CIAN					

4. Make sure that filter handler /MERP/CL_PM_OVRSTAT_STATUS_ORU is active, which by default injects system status IEAM5 (ORSC - Ready for Scheduling) and I0820 (JBFI – Job Finished) into OPER_EXCL_SYST_STAT filter.

(i) Note

If the default statuses defined in filter handler don't fulfill your business scenario, you can manually add the system statuses individually to the filter.

	Oper	ation: RE	AD	Filter Name:	OPER_EXCL_SYST_STAT
	Object N	lame: TJ		Reference Field Name:	ISTAT
Dete	Filter Rule	Key: SA	M2305_WORK_ORDER_GENERIC.READ.OPER_EXC	CL_SYST_STAT	
	Filter Rule	Type: St	atic Value in Range Table Format 🛛 🗸 🗸		
E	nter Ran	ge Value			
	Sign:				
ι	ow Value:		LT:Deletion Indicator		
н	igh Value:				
		63			
	ctive Flag:	8			
A	ctive Flag;	03			
A	ctive Flag: e List				
A	e List Rule No.	Rule Type	Rule Value	Active Flag	
A	ctive Flag: e List		Rule Value 10013	8	
A	e List Rule No.	Rule Type			
A	e List Rule No. 00002	Rule Type RANGE RANGE	10013	8	
A	e List Rule No. 00002 00003 00004	Rule Type RANGE RANGE	10013 10009	8	

5. Make sure that the filter handler /MERP/CL_PM_OVRSTAT_STATUS_ORU is active, which by default injects system status 10117 (DSPT - Scheduled), 10809 (JIPR – Job In Process), and 10010 (PCNF – Partially Confirmed) into OPER_INCL_SYST_STAT filter.

(i) Note

If the default statuses defined in filter handler don't fulfill your business scenario, you can manually add the system statuses individually to the filter.

Rule	e Editor					
	Oper	ation: RE	AD		Filter Name:	OPER_INCL_SYST_STAT
	Object N	lame: TJ)2		Reference Field Name:	ISTAT
Data	Filter Rule	Key: SA	M2305_WORK_ORDER_GENERIC.REA	D.OPER_IN	CL_SYST_STAT	*****
	Filter Rule	Type: Filt	er Handler	~		
S	elect Filt	er Handle	r			
lule	List					
	Rule No.	Rule Type	Rule Value		Active Flag	
۲	00001	HANDLER	/MERP/CL_PM_OVRSTAT_STATUS_O	RU	8	
0						
000						

6. Set *SET_INIT_SYS_STATUS* filter to active. Initial mobile status will be determined for both overall status profile based and non-phase model relevant orders.

Rule	Editor					
	Oper	ation:	READ		Filter Name	SET_INIT_SYS_STATUS
	Object N	Name:	/SYCLO/CORE_STR		Reference Field Name	BOOLEAN
ata			SAM2305_WORK_ORDER_GENER	IC.READ.SET_INIT_S	S_STATUS	
1	Filter Rule	Type:	Static Value in Range Table Format	~		
E	nter Ran	ge Valu	e			
Hi	Sign: ow Value: gh Value: tive Flag:					
	Rule No.	Rule Ty	pe Rule Value		Active Flag	
۲	00001	RANGE	х		63	
Ø						
0000						
0						

7. Set filter handler /MERP/CL_PM_OVRSTAT_STATUS_ORU to active, which by default injects system status IEAM6 (OMWC – Main Work Completed) and I0820 (JBFI – Job Finished) into WO_EXCL_SYST_STAT filter.

If the default statuses defined in filter handler don't fulfill your business scenario, you can manually add the system statuses individually to the filter.

Ru		

	Oper	ation: RE	AD	Filter Name:	WO_EXCL_SYST_STAT
	Object N		02	Reference Field Name:	ISTAT
Data	Filter Rule	e Key: SA	M2305_WORK_ORDER_GENERIC.READ.WO_EXCL_	SYST_STAT	
	Filter Rule Type:		atic Value in Range Table Format 🗸 🗸		
E	nter Ran	ge Value			
	Sign:	Inclusive	Option: =		
Low Value: 10045 - TECO:Technically completed					
н	igh Value:				
A	tive Flag:				
Rule	List				
-	Rule No.	Rule Type	Rule Value	Active Flag	
۲	00001	RANGE	10045	0	
0	00002	RANGE	10001	8	
0	00003	RANGE	10046	63	
0	00004	RANGE	10076	8	
0	00005	HANDLER	/MERP/CL_PM_OVRSTAT_STATUS_ORU	8	

3.3.12.2 Notification Assignment Type Configuration

Configuring the Notification Assignment Type Filter

The following assignment types are supported:

- 1: Header level person responsible
- 5: Header level work center
- D: Dependency queue
- 1. On the ConfigPanel home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. In the OData Mobile Data Object List select **SAM2310_NOTIFICATION_GENERIC**, and then the Data Filter tab.
- 3. Expand the Defined Filters list as follows; Departion READ Data Distribution and click NOTIF_ASSIGNMENT_TYPE. Click the Change button.
- 4. Set *Low Value* with the desired assignment type as defined by the assignment type model.
- 5. Save your changes.

	Oper	ation: R	EAD	Filter Name:	NOTIF_ASSIGNMENT_TYPE	
Object Name:		lame: /N	ERP/CORE_OMDO_DISTR_STR	Reference Field Name:	NOTIF_ASGMNT_TYPE	
Data	Filter Rule	Key: S	M2305_NOTIFICATION_GENERIC.READ.NOTIF_AS	SIGNMENT_TYPE		
8	Filter Rule	Type: St	atic Value in Range Table Format 🛛 🗸 🗸			
E	nter Ran	ge Value				
	Sign:	Inclusive				
2				**		
- 10	ow Value:	5 - Head	er Level Work Center			
1		5 - Head	er Level Work Center			
н	gh Value:		er Level Work Center			
н						
н	gh Value:					
H	gh Value:					
H	gh Value: tive Flag: List	8		Active Flag		
H	gh Value: tive Flag: List	8		Active Flag		
Rule	gh Value: tive Flag: List Rule No. 00001 00002	Rule Type	Rule Value	The second second second second		
Rule	gh Value: tive Flag: List Rule No. 00001 00002	Rule Type RANGE	Rule Value S	8		
H Ad Rule	gh Value: tive Flag: List Rule No. 00001 00002	Rule Type RANGE	Rule Value S	8		

Configuring the Notification Type Filter

- 1. On the ConfigPanel home page, select *OData Mobile Data Object Configuration*. Make sure to select your desired mobile application in the *Mobile Application Filter* field at the top of the page.
- 2. In the OData Mobile Data Object List select **SAM2310_NOTIFICATION_GENERIC**, and then the Data Filter tab.
- 3. Expand the Defined Filters list as follows; Departion READ Data Distribution and click NOTIF_TYPE. Click the Change button.
- 4. Set the */MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM* filter handler to *Active*. This filter handler returns notification types that have the overall status profile assigned.
- 5. Keep the */MERP/CL_PM_NOTIF_TYPE_ORU?PM* and */MERP/CL_PM_NOTIF_TYPE_ORU?CS* filter handlers active. Notification types returned will be non-phase model relevant.
- 6. Save your changes.

Rule Editor				
Opera	stion: RE	AD	Filter Name:	NOTIF_TYPE
Object N	ame: QN	IEL	Reference Field Name:	QMART
Data Filter Rule	Key: SA	M2305_NOTIFICATION_GENERIC.READ.NOTIF_TYPE		
Filter Rule T	Type: Filt	er Handler 🗸 🗸		
Select Filte				
Rule List				
Rule No.	Rule Type	Rule Value	Active Flag	
00001 00001 00001	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?PM	0	
00002	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?PM	\odot	
00003	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?QM	C)	
00004	HANDLER	/MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM	8	

3.3.12.3 Order Type oMDO Configuration

Context

Procedure

Set filter handler /MERP/CL_PM_ORDER_TYPE_ORU?PM and/or /MERP/CL_PM_ORDER_TYPE_ORU?CS to active as non-phase model relevant order types returned from the filter handler can be processed too.

/MERP/CL_PM_ORDER_TYPE_ORU?PM will return both phase and non-phase model relevant order types. The handler /MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM is redundant if both phase and non-phase model order types are to be processed.

(i) Note

Set /MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM to active, which returns order types that have overall status profile assigned, if only the phase model relevant orders needs to be handled by app.

	e Editor				
	Oper	ation: RI	AD	Filter N	ame: ORDER_TYPE
	Object N	lame: TO	030	Reference Field N	ame: AUART
ate	Filter Rule	Key: S	M2305_ORDER_TYPE.READ.ORDER_1	YPE	
	Filter Rule	Type: Fil	ter Handler	×	
S	elect Filt	er Handl	er		
In	put Param Active I	eter: PM Flag: (?)			
	Active F	Rag: 🕐	Rule Value	Active Flag	
	Active I E List Rule No.	Rule Type	Rule Value MERP/CL_PM_ORDER_TYPE_ORU?	PM (2)	
Rul	Active I E List Rule No.	Rule Type		PM (?)	
Rul	Active f E List Rule No. 00002	Rule Type	MERP/CL_PM_ORDER_TYPE_ORU?	PM (2)	

3.3.12.4 Notification Type oMDO Configuration

Context

Procedure

1. Set filter handler /MERP/CL_PM_NOTIF_TYPE_ORU?PM and/or /MERP/CL_PM_NOTIF_TYPE_ORU?CS to active, which returns notification types that have overall status profile assigned and others.

Filter handler /MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM is redundant if both phase and non-phase relevant notification types are to be processed. Set filter handler MERP/CL_PM_NOTIFTYP_OSTAT_ORU? PM to active if only phase model relevant notification types need to be processed in the app.

	e Editor				
	Oper		AD	Filter Nam	e: NOTIF_TYPE
	Object Name: TQ80			Reference Field Nam	e: QMART
Data	Filter Rule	Key: SA	M2305_NOTIF_TYPE.READ.NOTIF_TYPE		
3	Filter Rule	Type: Fit	ter Handler	¥	
S	elect Filt	er Handle	r		
In	Active I				
	Active I	Rag: 🕑	Rule Value	Active Flag	
	Active I	Rule Type		Active Flag	
Rule	Active I List Rule No.	Rule Type	Rule Value	8	
Rule	Active I List Rule No. 00001	Rule Type HANDLER	Rule Value /MERP/CL_PM_NOTIF_TYPE_ORU?PM	8	

2. Configure additional priority type values if notification uses priority type other than PM.

	Oper	ation: RE	AD	Filter Name:	NOTIF_PRIORITY_TYPE
Object Name		ame: TO		Reference Field Name:	ARTPR
Data	Filter Rule	Key: SA	M2305_NOTIF_TYPE.READ.NOTIF_PRIORITY_TYPE		
	Filter Rule	Type: Sta	atic Value in Range Table Format 🛛 🗸		
E	nter Ran	ge Value			
н	ow Value: igh Value: tive Flag:				
H Ad	igh Value:	PM - PM	priorities		
H Ad	igh Value: ctive Flag: e List	PM - PM	priorities	Active Flag	
H Ad	igh Value: ctive Flag: e List	PM - PM	priorities	Active Flag	
H Ad	igh Value: ctive Flag: e List Rule No.	PM - PM	Priorities Rule Value	Press and a second second	
H Ad	igh Value: ctive Flag: e List Rule No. 00001	PM - PM	Priorities Rule Value PM	0	

3.3.12.5 Work Order Partner Determination Procedure oMDO Configuration

Context

Procedure

The filter handlers /MERP/CL_PM_ORDER_TYPE_ORU?PM and /MERP/CL_PM_ORDER_TYPE_ORU?CS can stay active.

Filter handler /MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM can remain active, however it is redundant as it will pick up only the phase model enabled order types. Handler /MERP/CL_PM_ORDER_TYPE_ORU?PM will take care of both phase model and non-phase model order types.

oMDO ld:	SAM2305_P/	ARTNER_DE	T_PROC		Description:	Partner D	etermination Procedure		
Mobile Application:	SAP Service	and Asset M	lanager 2305						
oMDO Handler:	/MERP/CL_P	M_PARTNER	R_DET_OD						
General Setting	Technical M	odel Info	Data Filte	Field Selection	Change D	Detection	Dependent Object Tr	ransaction Settings	
Defined Filters	t-	Rule E	ditor						
 Operation - REA Standard Filte 			Operation:	READ			Filter Nam	e: ORDER_TYPE	
V ORDER T	YPE*	0	bject Name:	V_T350_PAR			Reference Field Nam	e: AUART	
PARTNER	DET PROC	Data Filt	er Rule Key:	SAM2305_PARTNER_D	ET_PROC.REA	D.ORDER_1	IYPE		
		Filte	r Rule Type:	Filter Handler		×			
V PARTNER_	FONCTION	Sele	ct Filter Har	dler					
			Handler:*	oMDO Filter Rule - Order	Туре				
		Input		PM					
				2					
			(), (), (), (), (), (), (), (), (), (),						
		Rule Lis	st						
		Ru	le No. Rule T	ype Rule Value			Active Flag		
		0 00	0001 HAND	LER /MERP/CL_PM_O	RDER_TYPE_C	RU?CS	\odot		
		. 00	0002 HAND	LER MERP/CL_PM_O	RDER_TYPE_C	RU?PM	2		
		0 00	0003 HAND	LER /MERP/CL_PM_O	RDTYPE_OSTA	T_ORU?PM	0		

3.3.12.6 Notification Partner Determination oMDO Configuration

Context

Procedure

Set filter handler /MERP/CL_PM_NOTIF_TYPE_ORU?PM (this will pull up both phase model and non-phase model notifications) and /MERP/CL_PM_NOTIF_TYPE_ORU?CS to active. Handler /MERP/CL_PM_NOTIF_TYPE_ORU?CS to active. Handler /MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM can remain active, however would be redundant if both phase and non-phase model notifications are pulled up.

oMDO Id:	SAM2305_N	OTIF_PART	NER_DE	т		Description:	Notification	n Partner Determination P	rocedure	
Mobile Application:	SAP Service	and Asset M	Manager	2305						
oMDO Handler:	/MERP/CL_P	M_NOTIFP	ARTNER	DET						
General Setting	Technical Mo	odel Info	Data	Filter	Field Selection	Change D	etection	Dependent Object	Trans	action Settings
Defined Filters	t-	Rule E	ditor							
 Operation - REA 	D		0.000	ing pr				Film	Alamai	NOTE THE
✓	er		Opera		AD				r Name:	NOTIF_TYPE
V NOTIF_TY	PF*	0	Object Na	me: TO	80			Reference Field	d Name:	QMART
		Data Fil	Iter Rule	Key: SA	M2305_NOTIF_PART	NER_DET_PR	OC.READ.NO	DTIF_TYPE		
V PARTNER		Filb	er Rule T	ype: Filt	er Handler		~			
V PARTNER	FUNCTION	Colo	et Eilte	r Handle						
		Sele	ct Fille	r nanute						
			Handle	er:* oME	O Filter Rule - Notific	ation Type				
		Innet	t Parame							
			Active FI	ag 🕗						
		Rule Li	ist							
		R	ule No. I	Rule Type	Rule Value			Active Flag		
		• 0	0001	HANDLER	/MERP/CL_PM_NO	DTIF_TYPE_OF	RU?PM	0		
		0 0	0002	HANDLER	/MERP/CL_PM_NO	DTIF_TYPE_OF	RU7CS	8		
		0 0	0003	HANDLER	/MERP/CL_PM_NO	DTIF_TYPE_OF	RU7QM	0		
		0 0	0004	HANDLER	/MERP/CL_PM_NO	TIFTYP_OST	AT_ORU?PM			

3.3.12.7 Overall Status oMDO Configuration

Context

Procedure

1. Use *EXCL_MOBILE_STATUS_SEQ* filter to disable certain phase model status transitions on your mobile client.

The configuration of phase model status transition allows SUBMITTED to ACTIONREQ, but it isn't allowed in SAM, hence the following filter values must be active when phase model is enabled.

oMDO Id:	SAM2110_OVERALL_STA	ATUS	Description: Over	all Status Mapping	
Mobile Application:	SAP Asset Manager 2110)			
oMDO Handler:	/MERP/CL_PM_OVERALI	L_STATUS			
General Setting Tec	hnical Model Info	a Filter Field Selection	Change Detection Depende	nt Object Transaction Settings Outbo	und Trigger Assignment
Defined Filters	\uparrow^-	Rule Editor			
✓		Operation: RE	AD	Filter Name:	EXCL_MOBILE_STATUS_SEQ
✓ I Standard Filter		Object Name: /S	CLO/CA000S	Reference Field Name:	MOBILE_STATUS
htterning	LE_STATUS_SEQ*	Data Filter Rule Key: SA	M2110_OVERALL_STATUS.READ.	EXCL_MOBILE_STATUS_SEQ	
	-	Filter Rule Type: Sta Enter Range Value Sign: Inclusive	tic Value in Range Table Format	✓ 	
y orenee_o		Low Value: SUBMITT High Value: Active Flag: 🗸			
		Rule List			
		Rule No. Rule Type	Rule Value	Active Flag	g
		• 00001 RANGE	SUBMITTED	\checkmark	
		O0002 RANGE	RESUBMIT	\checkmark	

2. Make sure filter handler /MERP/CL_PM_NOTIF_TYPE_ORU?PM is active, which returns notification types that have overall status profile assigned as well as non-phase model relevant ones.

Filter /MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM is redundant if both phase and non-phase notifications are to be processed in the app. Set filter handler /MERP/CL_PM_NOTIFTYP_OSTAT_ORU?PM to active if only phase model relevant notification types need to be processed in the app.

Rule Editor				
Ope	ration: RE	AD	Filter	Name: NOTIFICATION_TYPE
Object		80	Reference Field	Name: QMART
Data Filter Ru	le Key: SA	M2305_OVERALL_STATUS.READ.NOTIFIC	ATION_TYPE	
Filter Rule	Type: Fill	er Handler	*	
Select Fil	ter Handle	r		
Active Rule List	Flag: 🕑			
Rule No	Rule Type	Rule Value	Active Flag	
00001 00001 00001	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?PM	(2)	
00002	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?CS	0	
0 00003	HANDLER	/MERP/CL_PM_NOTIF_TYPE_ORU?QM	0	
00004	HANDLER	/MERP/CL_PM_NOTIFTYP_OSTAT_ORU	?PM (?)	

3. Make sure filter handler /MERP/CL_PM_ORDER_TYPE_ORU?PM is active, which returns order types that have overall status profile assigned as well as non-phase model relevant ones.

Filter /MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM is redundant if both phase and non-phase orders are to be processed in the app. Set filter handler /MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM to active if only phase model relevant order types need to be processed in the app.

Rule Editor					
Operation	RE/	ND	Fi	ter Name:	ORDER_TYPE
Object Name	: TO	30	Reference Fi	eld Name:	AUART
Data Filter Rule Key	SAL	12305_OVERALL_STATUS.READ.ORD	R_TYPE		
Filter Rule Type	: Filt	er Handler	~		
Select Filter H	andle	r			
Handler.*	oMD	O Filter Rule - Order Type			
Input Parameter:	PM				
Active Flag:	3				
Rule List					

	Rule No.	Rule Type	Rule Value	Active Flag
۲	00001	HANDLER	/MERP/CL_PM_ORDER_TYPE_ORU?PM	2
0	00002	HANDLER	/MERP/CL_PM_ORDER_TYPE_ORU?CS	0
0	00003	HANDLER	/MERP/CL_PM_ORDER_TYPE_ORU?QM	0
0	00004	HANDLER	/MERP/CL_PM_ORDTYPE_OSTAT_ORU?PM	2
0				

3.3.12.8 Mobile Status Mapping Configuration

The ConfigPanel shows you which PM mobile statuses are mapped to phase model statuses.

From the ConfigPanel home page, navigate to *Mobile Application Configuration Mobile Status Setting* tab. Select your application in the *Defined Mobile Applications* list. Click the *Change* button to change the configuration.

The Status Attribute 1 and Status Attribute 2 fields are used for the status mapping as follows:

- Status Attribute 1: Overall status
- Status Attribute 2: Overall status profile. If an asterisk (*) is present, it means any overall status profile.

General	Aobile Status Setti	ng Conversi	on Exit Setting	System Com	ponents	Parameters	Client	Globals	User Attrib	utes Ap	optication Persona	Features
Mobile Applic	ation Info						_					
Mobile Application	SAP_SERVICE	E_ASSET_MANAGE	R_2305	Release:	2305							
Mobile App. Des	c: SAP Service a	ind Asset Manager :	2305									
Mobile Status	Mapping											
Mobile Status L	ist											
Object Typ	Mobile Status	Status Attribute 1	Status Attribute 2	System Status	Status Profile	User Status	Initial Status	Skip Update	Disabled			
	ION ACTIONREO		+				0	0	0			
statistical designation in the last	ON COMPLETED			10072			0	Ö	O			
O NOTIFICAT	ION HOLD						0	ö	(2)			
O NOTIFICAT	INPROGRESS						0	O.	(2)			
O NOTIFICAT	ION POSTPONE			10069			Ö	0	69			
O NOTIFICAT	ION RECEIVED						2	Ö	C)			
Mobile Stat	us Detail											
Object T	DE NOTIFICATIO									ile Status Ali		
									NICO	ne status Au	40 L154	
Mobile Str	ACTIONREO			Label On I		n Required						
Status Attribut				Status Attri						* Language	Alias	
System Sta	tus:											
Status Pro	61e:			User	Status:							
Initial Str												
	100			Skip Status L	Andress 111							
Disab	led: ()											

If you're enabling the phase model, activate the following mobile statuses by setting the *Status Attribute 1* and *Status Attribute 2* fields as indicated in the table. In an out of the box installation, the statuses are inactive, as the phase model is disabled by default.

③ Note

Set any other statuses not indicated in the following to *Disabled* when you enable the phase model.

Mobile	Status	Mapping
11100110	orarao	mapping

Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status
NOTIFICATION	ACTIONREQ	R020	×	

Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status
NOTIFICATION	COMPLETED			10072
	Status is used in both phase model ON and OFF scenarios			
NOTIFICATION	STARTED	R025	×	10070
NOTIFICATION	STARTED			
	Status is used in both phase model ON and OFF scenarios			
NOTIFICATION	SUBMITTED	R005	×	
WORKORDER	COMPLETED	R075	×	
WORKORDER	DONE	R080	×	
WORKORDER	READY	R065	×	
WORKORDER	STARTED	R070	×	
WO_OPERATION	COMPLETED	R140	×	
WO_OPERATION	HOLD	R135	×	
WO_OPERATION	READY	R125	×	
WO_OPERATION	STARTED	R130	×	

Save any changes you've made.

3.3.12.9 Mobile Status State Machine

The status transition of phase model is maintained in DIMG > Plant Maintenance and Customer Service Maintenance > Service Processing > Fiori Apps for Apps for Apps Configure Overall Status Profiles .

Service with the service of the serv

6 Dialog Structure Overall Status Profiles for Overall Status Profile Status Sequence Entity Description Is Logged Is Skippable ✓ ⑦ Overall Status PMSP1 Notification Header Submitted (Request) \checkmark Conditions PMSP1 R010 10 Notification Header Accepted (Request) \checkmark 🗀 Alternative Seq PMSP1 RØ15 15 Notification Header Rejected (Request) 🗋 Events PMSP1 R020 Notification Header Action Required (Request) 20 \checkmark \checkmark PMSP1 R025 25 Notification Header Resubmitted (Request) \checkmark \checkmark PMSP1 R030 30 Notification Header Order Assigned (Request) \checkmark \checkmark PMSP1 35 In Planning (Order) RØ35 Order Header \checkmark PMSP1 40 Order Header Submitted for Approval (Order) \checkmark R040 45 PMSP1 R045 Order Header Approved (Order) \checkmark \checkmark 50 PMSP1 Order Header Rejected (Order) R050 \checkmark PMSP1 55 R055 Order Header In Preparation (Order) \checkmark PMSP1 R060 60 Order Header Ready to Schedule (Order) \checkmark 1 PMSP1 65 R065 Order Header Ready for Execution (Order) $\overline{\mathbf{V}}$ 70 PMSP1 R070 Order Header ✓ Main Work Started (Order) \checkmark \checkmark PMSP1 R075 75 Order Header Main Work Completed (Order) \checkmark \checkmark PMSP1 R080 80 Order Header VWork Done (Order) \checkmark \checkmark V Technically Complete (Order) PMSP1 R085 85 Order Header \checkmark \checkmark PMSP1 R090 90 Notification Header Completed (Request) \checkmark \checkmark PMSP1 R092 92 Order Header VWork Not Performed (Order) \checkmark PMSP1 95 Order Header V Closed (Order) R095 $\overline{\mathbf{V}}$ PMSP1 R100 100 Notification Header Deletion Flag (Request) \checkmark PMSP1 R105 105 Order Header ✓ Deletion Flag (Order) PMSP1 110 Order Operation ✓ In Planning R110 PMSP1 R115 115 Order Operation In Preparation \checkmark \checkmark PMSP1 R120 120 Order Operation Ready to Schedule \checkmark \checkmark PMSP1 R125 125 Order Operation Ready for Execution PMSP1 130 ✓ Work in Execution R130 Order Operation \checkmark \checkmark PMSP1 R135 135 Order Operation Vork Paused \checkmark PMSP1 R140 140 Order Operation VWork Finished $\overline{\mathbf{V}}$ \checkmark PMSP1 R145 145 Order Operation Technically Complete \checkmark PMSP1 R150 150 Order Operation Closed \checkmark

Status transition information is downloaded as *EAMOverallStatusSeqs* entity set to the mobile client, which determines status transition on the device.

Note

As of the SAP Service and Asset Manager 2305 release, SAP is adding new state transitions to the mobile state machine for the supervisor role and the technician role within the maintenance technician persona.

Configure the state transitions (add, remove, activate, or disable) in the state machine for the corresponding phase model flag. The data filter *MOBILE_STATUS_STATE_MACHINE* is found in *SAM2305_OVERALL_STATUS*.

The state transitions corresponding to the phase model in the state machine are added based on the phase model state profile from the core configuration. The state machine is the driving factor and NOT the state transition in IMG (IMG > > > Plant Maintenance and Customer Service > > Maintenance Service Processing > > > Fiori Apps for Maintenance Processing > > Configure Overall Status Profiles) as of SSAM2305.

③ Note

New fields USER_PERSONA, FEATURE_ID and PHASE_MODEL_RELEVANT have been added to the state machine table to indicate transitions specific to persona, feature and if they are relevant to the phase model only. For example, the highlighted status transition on the screenshot below allows a supervisor with a maintenance technician persona to not approve a work order operation in review status for an order type without a phase model when the PM_SUPERVISOR_PHASE model feature is enabled.

entitio ar Lawould, disklora Matter Ramanine, 500 Service and Am antitio Ramanine, (MSMRCE, MV, OVE	an Harape 2011	
Defines Fitters		
Contract Land Lands Accession 4245 Ac	Operation #Ex0 Page Name: DODELE_STATUS_STATUS_NAME Reducers News INTER_NEWS_NEWS_NEWS_NEWS_NEWS_NEWS_NEWS_NEWS	
	Part Lie State Field EVEN State State Field EVEN State State State Field EVEN State Field EVEN Field Field	

3.3.12.10 Persona and Feature Enablement

EAM phase model is added as persona and feature assignment. When phase model is enabled, the following persona/feature assignment must be enabled. By default, the following setting is inactive:

ConfigPanel Home	Mobile Application Filter: *	\sim	
Application Assignment Definitions			
⊘ Change ← Application Search			
Mobile Application: SAP_ASSET_MANAGER_2110	Mobile App. Type: oData Application	Release: 2110	
Mobile App. Desc.: SAP Asset Manager 2110			
User Personas Switchable Features			
Apply Filters			-
User Persona: MAINTENANCE_TEC	HNI 🗸	App. Feature Id:	
Feature Assignment			
Show Only Selected			
User Per	sona	App. Feature Id	Active Flag
O MAINTENANCE_	TECHNICIAN	CA_ATTACHMENT	
0		CA_CLASSIFICATION	 Image: A start of the start of
		CA_CORE_DATA	\checkmark
0		CA GEOSPATIAL INFO SERVICE	
0		EAM_PHASE_MODEL	
0		MM_MATERIAL_DATA	V
0		MM_STOCK_LOOKUP	V
0		MM_TECHNICIAN_GOODS_ISSUE	
0		PM_CLOCK_IN_CLOCK_OUT	V
0		PM_CONFIRMATION	
0		PM_MEASUREMENT	
		PM_NOTIFICATION	
0		PM_SUPERVISOR_MODE	
		DM WODY ODDED	

When *EAM_PHASE_MODEL* feature is active, phase model-related data is downloaded during synchronization, for example *WorkRequestConsequence* or *Effect*.

ion: SAP_ASSET_MANAGER_2110 Mobile App. Type: oData Application s Switchable Features	Release:	2110	Mobile App. Desc.:	SAP Asset Manager 2110	
IS					
Id: EAM_PHASE_MODEL V OMDO Id:			✓ ome	00 Process Flow:	
List					
lected					
App. Feature Id		oMDO Id			Active Flag
EAM_PHASE_MODEL		SAM2110_CONSE	QUENCE		\checkmark
		SAM2110_DETECTIO	N_METHOD		\checkmark
		SAM2110_EFF	ECT		\checkmark
		SAM2110_LTEXT_T	EMPLATE		\checkmark
		SAM2110_NOTIFICATIO	ON_GENERIC		\checkmark
		SAM2110_OVERALI	STATUS		\checkmark
		SAM2110_PM_MOBI	LE_STATUS		
		SAM2110_WORK_ORD	ER_GENERIC		\checkmark
		SAM2110_WRKREQ_CC	DNSEQUENCE		 Image: A start of the start of

When phase model is disabled, mobile status in SAM 2110 behaves the same as in previous versions. However, status state machine is added to SAM 2110. The related configurations are the following:

Mobile Status Mapping Configuration

Mobile status mapping is still maintained in Configuration Panel with phase model-related statuses disabled in SAM 2110.

le /	Application (Di	isplay Mode)								
eat	e) 🗐 Copy 🗑	Delete	nge							
iene	eral Mobile St	atus Setting Co	nversion Exit Setting	System Componen	ts Parameters	Client Globa	ls User Attri	ibutes Applic	ation Persona	
lol	bile Application	n Info								
lob	ile Application: S	AP_ASSET_MANAG	GER_2110	Release: 21	10					
Лоb	ile App. Desc.: S	AP Asset Manager 2	2110							
	_									
lol	oile Status Ma	pping								
lol	bile Status List									
	ol: 17					0 D (1				D : 11
~	Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status	Status Profile	User Status	Initial Status	Skip Update	Disabl
-	WO_OPERATION									
	WO_OPERATION									
~	WO_OPERATION		R130	*						
	WO_OPERATION		K150							
	WO OPERATION									
~	– Iobile Status D							J	J	U
IV	iobite Status D	,cturt								
	Object Type:	NOTIFICATION						Mobile S	itatus Alias L	ist
	Mobile Status:	COMPLETED		Label On M	lobile: complete_i	notification				
St	atus Attribute 1:			Status Attrib	oute 2:			* Lan	guage Alias	
	System Status:	10072								
	Status Profile:			User S	Status:					
	Initial Status:			Skip Status U	pdate:					
	Disabled:									
		_								

The following mobile status mapping must be active when phase model is disabled:

Mobile Status	Mapping	Configuration
---------------	---------	---------------

Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status
NOTIFICATION	COMPLETED			10072
	*this status is used in both phase model ON and OFF scenarios.			
NOTIFICATION	POSTPONE			10069
NOTIFICATION	RECEIVED			
NOTIFICATION	STARTED			10070
	*this status is used in both phase model ON and OFF scenarios.			
TASK	COMPLETED			10156
TASK	RECEIVED			
TASK	STARTED			10155
TASK	SUCCESS			10157
WORKORDER	COMPLETED			10045
WORKORDER	HOLD			
WORKORDER	RECEIVED			10630
WORKORDER	REJECTED			
WORKORDER	REVIEW			
WORKORDER	STARTED			10002
WORKORDER	TRANSFER			
WO_OPERATION	COMPLETED			
WO_OPERATION	HOLD			
WO_OPERATION	RECEIVED			
WO_OPERATION	REJECTED			
WO_OPERATION	REVIEW			
WO_OPERATION	STARTED			
WO_OPERATION	TRANSFER			

Mobile Status State Machine Configuration

Mobile status state machine is added as filter in Overall Status oMDO (SAM2110_OVERALL_STATUS). This configuration allows us to configure all status transition on mobile client, given the mobile status is already maintained in the configuration of mobile status mapping.

Mobile Application: SAP Asset Manager 21 oMDO Handler: MERP/CL_PM_OVERA eneral Setting Technical Model Info Data		Description: Ove		rigger Assignment	
Pred Filters Operation - READ Standard Filter ✓ EXCL_MOBILE_STATUS_SEQ* MOBILE_STATUS_STATE_MACHINE* ✓ NOTIFICATION_TYPE* ✓ ORDER_TYPE* ✓ OVERALL_STATUS_PROFILE	Table Rule Editor Operation: F Reference Table Name: M Rule Category: S	MERP/PM_MBLSTAT_STATMACH		ACHINE	
,		IS_MANDATORY: False FLAG_DISABLED: Inactive			
	Rule List		70.071710		
	ROLE_TYPE	FROM_STATUS	TO_STATUS	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE	WORKORDER: HOLD	WORKORDER: STARTED	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T	WORKORDER: HOLD WORKORDER: STARTED	WORKORDER: STARTED	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED WO_OPERATION: STARTED	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED WO_OPERATION: COMPLETED	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED WO_OPERATION: STARTED WORKORDER: RECEIVED	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED WO_OPERATION: COMPLETED WORKORDER: TRANSFER	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T T T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED WO_OPERATION: STARTED WORKORDER: RECEIVED WORKORDER: HOLD	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED WO_OPERATION: COMPLETED WORKORDER: TRANSFER WORKORDER: TRANSFER	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T T T T T T T T T T T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED WO_RORDER: RECEIVED WORKORDER: RECEIVED WO_OPERATION: RECEIVED	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED WO_OPERATION: COMPLETED WORKORDER: TRANSFER WO_OPERATION: TRANSFER	IS_MANDATORY	FLAG_DISABLED
	ROLE_TYPE T T T T T T T T T	WORKORDER: HOLD WORKORDER: STARTED WO_OPERATION: RECEIVED WO_OPERATION: STARTED WORKORDER: RECEIVED WORKORDER: HOLD	WORKORDER: STARTED WORKORDER: COMPLETED WO_OPERATION: STARTED WO_OPERATION: COMPLETED WORKORDER: TRANSFER WORKORDER: TRANSFER	IS_MANDATORY	FLAG_DISABLED

ROLE_TYPE property allows you to define status transition record to be relevant for Technician or Supervisor. Any supervisor-specific status records are used only if Supervisor mode is enabled.

When phase model is enabled, this filter would simply be ignored.

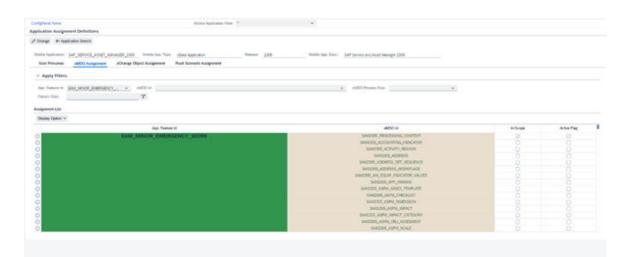
3.3.12.11 Minor Emergency Work

This new feature is added to support emergency or minor work in a reactive maintenance phase model. It helps to skip phases and issue a work order or notification when a technician is authorized to create those items.

If the technician is authorized, he will see an option called *Minor Work*. When this option is selected and the request is submitted, the request is not sent to the screening technician for approval, but is automatically approved and is moved to the planning phase.

As for 2305 release:

- A new *EAM_MINOR_EMERGENCY_WORK* feaure is created and assigned to a new *NotificationProcessingContexts* entity linked to the *NotifProcessingContext* property in the *MyNotificationHeaders* entity
- A new OrderProcessingContext field is added to the MyWorkOrderHeader entity. It is intended to be used as a filter for reading WOs and operations.
- The user must have authority (the *I_EXCP_MN* object: Exception Process > Maintenance Notification) to be able to create a notification with an exception process.



(i) Note

This feature is available in S/42022, that is, in S4CORE 107 and beyond, as a basic feature.

3.3.12.12 EAM Phase Control Code

The process control code can limit a certain process state change based on the system state. It can also be applied to the execution phase, which prevents the user from moving the order or operation from one sub-phase to another.

As for 2305 release:

- IMG backend configuration path is the following: IMG > > Logistics > > General > > Product Lifecycle Management (PLM) > > Plant Maintenance and Customer Service > > Maintenance and Service Processing > > Fiori Apps for Maintenance Processing > General Settings > Define Phase Control Code for Maintenance Orders
- The new feature *EAM_PHASE_CONTROL* is created to enable the EAM phase control code. To block the transition of an order or operation from one phase to another when the phase model function is enabled. If the EAM_PHASE_CONTROL feature is active, the following entities are enabled.
 - PhaseControl
 - PhaseControlCode
 - PhaseControlKey
 - PhaseControlSystemMobileStatusMap
 - PhaseControlSystemStatus
 - WorkOrderOperationPhaseControl
 - WorkOrderPhaseControl
- This feature is active right out of the box. To disable it, refer to the feature configuration.

Dange & Againation Search			
	mit 2028 Million Ave. Date: And Ganata and Assat Manager 2028		
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Diakey Option. +			
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	SANCER PHASE CONTROL CODE		
EAM PHASE CONTROL			
	SANCERS, MONH, CHICK, PRACE, CTIN,		
	SHIEDER, WORK, CREEK, PHKZY, CTIS, SHIEDER, ACCOUNTING, VIDELATOR		
	Salactan, Jackar, Salactan, Jakar, Stan Salactan, Jacobanthan, Jacobantha Salactan, Jacobantha, Jacobantha		
	SANDERS, SICHN, CHEEM, PANZE, CHE, SANDERS, JACONSTING, JIOCOSTIN SANDERS, JACONSTIN SANDERS, JACONSTI		
	sectors, sono, career, yever, zms. sectors, eccovering, sectors sectors, eccover, paratel sectors, covers, sectors backget, covers, sectors		
	Sectors, Jone, Johney, Precedy, Jimo Sectors, Jacobson Mark, Jones Jacobson Sectors, Jecovery, Jesson Bacters, Jecovers, Jero, Jesophysic Bacters, Jecovers, Jero, Jesophysic		
	Sectors, sono, career, yesep, zms. Sectors, eccontrain, spectrum sectors, eccontrain, spectrum sectors, zonoris, and Marcine, contrain, uncontrain, and sectors, contrain, uncontrain, and sectors, contrain, uncontrain, and sectors, contrain, uncontrain, and		
	Sectors, Jones, Johney, Percey, Jimis Sectors, Jacobier, Jacobier Sectors, Jacobier, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier		
	Sectors, sono, career, yesequittes Sectors, paccores Sectors, accordination, paccettes Sectors, accordination Matters, accessita, acc. matterson Sectors, accessita, acc. matterson Sectors, accessita, acc. matterson Sectors, accessita, acc. matterson Sectors, accessita, accessita, accessita Sectors, accessita, accessita, accessita Sectors, accessita, accessita		
	Sectors, Jones, Johney, Percey, Jimis Sectors, Jacobier, Jacobier Sectors, Jacobier, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier Materia, Jacobiers, Jacobier		
	Sectors, sono, career, yesequittes Sectors, accounting, sectors Sectors, accounting, sectors Sectors, accounting, sectors Matters, accounting, sectors Matters, accounting, sectors, sectors Sectors, accounting, sectors, sectors Sectors, accounting, sectors Sectors, accounting, sectors Sectors, accounting, sectors Sectors, accounting, sectors Sectors, accounting, sectors Sectors, accounting, sectors		
	Sectors, Jones, Johney, Privoly, John Seutoss, Jacobartina, Sackara Sectors, Jacobartina, Jacobartina Balasta, Jacobartina, Balantina Balasta, Jacobartina, Balantina Balasta, Jacobartina, Balantina Balasta, Jacobartina, Balantina Balasta, Jacobartina, Jacobartina Balasta, Jacobartina, Jacobartina Balasta, Jacobartina, Jacobartina Balasta, Jacobartina, Jacobartina Balasta, Jacobartina, Jacobartina		

O Note

For this feature to work, the *EAM_PHASE_MODEL* feature must be active in the SSAM application configuration.

③ Note

This feature is available for the S4CORE 106 and subsequent versions.

3.4 Geospatial Service Definitions

Geospatial Services provide the technology to create, analyze, maintain, and distribute geospatial data and information.

You can use either GIS (Geographic Information System) or GEF (Geographical Enablement Framework) with the app. Note that you can use either service, but you can't use both Services at the same time in the application.

(i) Note

Esri base maps are the only base maps supported for the app.

3.4.1 Geographic Information System (GIS)

A geographic information system (GIS) integrates hardware, software, and data for capturing, managing, analyzing, and displaying all forms of geographically referenced information.

The SAP Service and Asset Manager application has custom map controls with GIS functionality implemented using Mobile Development Kit and Open UI extensions. The SAP Service and Asset Manager application is delivered with predefined globals that are Esri-specific, however, you can point to any GIS vendor you choose.

For information about configuring GEF, see the subtopics located Geographical Enablement Framework (GEF) [page 206] topic.

3.4.1.1 Configuring Your Map Settings

Some GIS settings are standard with the initial SAP Service and Asset Manager application.

You can change any of the settings described in this topic to configure the application for your site.

(i) Note

You can also change the map setting metadata through the Mobile Development Kit. Note that if there are metadata differences, Mobile Development Kit changes override ConfigPanel changes.

OData Model Configuration - Property List Tab

In the ConfigPanel, the GISMapParameter entity type contains the following properties:

- ParameterGroup
- ParameterName
- ParentParameterGroup
- ParameterValue

Use the fields in the following section to properly categorize these parameters.

ty Type Name:	GISMapParameter				Active Fla	g: 🗸				Entity	Type Id: 344	0B5B074361	EE8A0A	739803	CA4
ile Application:	SAP ASSET MANAGE	R 30 : SAP Asset Manager 3.													
ata Service Id:	3440B5B074361EE8A0/	1739803CA2D		Tech.	Service Nam	e: /MERP/S	SAP_ASSE	T_MANAGE	R_30		Version: 000	1			
* oMDO Id:	SAM30_GIS_MAP_CON	ITROL : GIS Map Control		* oME	DO Entity Typ	e: INI_PAR	AMETER :	/MFND/CO	RE_INI_PAR	AM_					
EntitySet	Property List Assoc	iation & Set List Navigation Property List Adv	ditional Setting	oMDO	O Assignmen	t									
EntitySet	Property List Assoc	ation & Set List Navigation Property List Adv	ditional Setting	oMD	O Assignmen	t									
EntitySet	Property List Assoc	iation & Set List Navigation Property List Adv	ditional Setting	oMD	O Assignmen	t									
EntitySet	Property List Assoc	iation & Set List Navigation Property List Adv	ditional Setting	oMD	O Assignmen	t									
EntitySet *Property Nam		iation & Set List Navigation Property List Adv	ditional Setting Edm Type		O Assignmen Creatable		Sortable	Nullable	Filterable	Content Type	Max Length	Precision	Scale	ETag	Conversion Exi
	ne		Edm Type				Sortable	Nullable	Filterable	Content Type	Max Length	Precision 0	Scale 0	-	Conversion Exi
*Property Nam	ne	*oMDO Field Name	Edm Type Edm.String	Key			Sortable	Nullable			-		0		Conversion Exi
*Property Nam ParameterGro	ne ioup ame	*oMDO Field Name INI_PARAM_GROUP - CHAR (40) : Param	Edm Type Edm.String Edm.String	Key	Creatable	Updatable	Sortable	Nullable	V		40	0	0		Conversion Exi

OData Mobile Data Object Configuration - Data Filter Tab

From the ConfigPanel Home page, navigate to OData Mobile Data Object Configuration Data Filter Tab <APP_VERSION>_GIS_MAP_CONTROL Operation - READ Data Distribution . Click the Change button.

The following parameters are standard:

- CONFIG: Parameter Group
- BASEMAP: Parent Parameter Group
- FEATURELAYER: Parent Parameter Group

See the following for an example screenshot of the parameters in the ConfigPanel in the *Data Filter* tab, and a table representing how to configure the parameters in the tab.

oMDO Id Mobile Application oMDO Handler	INT NAME TRANSPORT		Description: GIS Map Control	
General Setting Tech	nical Model Info Data Fi	ter Field Selection Change Detection	on Dependent Object Transaction Settings Outbound Trigger Assignment	
Defined Filters 😞	Table Rule Editor			
✓ Soperation - READ				
Data Distribution	Operation:		ilter Name: INI_PARAMETER	
INI_PARAMETER*	Reference Table Name:	/MFND/CORE_INI_PARAM_STR		
	Rule Category:	Static Table Rules		
		Param. Grou Param. Nam		
		Param. Valu		
		Parent Param. Grou	up:	
	Rule List			
	Param. Grou			
	Faram. Grou	Param. Name	Param. Value	Parent Param. Group
	CONFIG	D Param. Name UseDynamicLayerDisplayPrefs	Param, Value True	Parent Param. Group
				Parent Param. Group
	CONFIG	UseDynamicLayerDisplayPrefs	True	Parent Param. Group
	CONFIG CONFIG	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled	Тгие Тгие	Parent Param. Group
	CONFIG CONFIG CONFIG	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled EnableNearMe	True True True	Parent Param. Group
	CONFIG CONFIG CONFIG CONFIG	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled EnableNearMe EnableFeatureLayers	True True True True	Parent Param. Group
	CONFIG CONFIG CONFIG CONFIG CONFIG	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled EnableNearMe EnableFeatureLayers EnableBaseMaps	True True True True True True	Parent Param, stoup
	CONFIG CONFIG CONFIG CONFIG CONFIG 1	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled EnableNearMe EnableFeatureLayers EnableBaseMaps URL	True True True True True Mitps://services.arcgisonline.com/ArcGiS/rest/services/Canvas/World_Light_Gray_Base/MapServer	BASEMAP
	CONFIG CONFIG CONFIG CONFIG CONFIG 1 2	UseDynamicLayerDisplayPrefs ZoomOnLocationEnabled EnableNeanfile EnableFeatureLayers EnableBaseMaps URL URL	True True True True True True https://services.arcgisonline.com/ArcGiS/rest/services/Canvas/World_Light_Gray_Base/MapServer https://services.arcgisonline.com/ArcGiS/rest/services/World_Street_Map/MapServer	BASEMAP BASEMAP

Parameter Group	Parameter Name	Parameter Value	Parent Parameter Group	Description
1	URL	<https:></https:>	BASEMAP	Basemap URL
2	Name	Text value	BASEMAP	Basemap display name
1	Filename	<filename.tpk></filename.tpk>	BASEMAP	Offline filename for basemap
1	Name	Text value	FEATURELAYER	Display name of fea- ture layer
1	URL	<https:></https:>	FEATURELAYER	Feature layer URL
1	Properties	<pre></pre>	FEATURELAYER	Feature layer proper- ties/ attributes to dis- play in object cell. Map properties to ObjectCellfields
1	Actions	[]	FEATURELAYER	Array of actions to run for this feature layer.

Parameter Group	Parameter Name	Parameter Value	Parent Parameter Group	Description
CONFIG	EsriClientID	<enter esri="" license<br="">Key></enter>		Esri runtime license string.
				© Note
				For more informa- tion about how to get license to ESRI ClientID, see ArcGIS Devel- opers documenta- tion M.
CONFIG	EsriAPIKey	<enter api="" esri="" key=""></enter>		© Note
				You can find your ESRI API Key on the dashboard in your ArcGIS de- veloper account. For more infor- mation and API Key description, see ArcGIS Devel- opers documenta- tion M.
CONFIG	UseDynamicLayer DisplayPrefs	TRUE/FALSE		Use layer visibility set- ting from each dy- namic layer (business layer) as default.
CONFIG	ZoomOnLocationE nabled	TRUE/FALSE		Set to true if the map must zoom to current location when location is toggled on.
CONFIG	EnableNearMe	TRUE/FALSE		Enable near me feature
CONFIG	EnableFeatureLa yers	TRUE/FALSE		Enable display of fea- ture layers.
CONFIG	EnableBaseMaps	TRUE/FALSE		Enable display and switching of base- maps.
CONFIG	EnableDynamicLa yers	TRUE/FALSE		Enable display of dy- namic layers (business layers)

Parameter Group	Parameter Name	Parameter Value	Parent Parameter Group	Description
CONFIG	EnableCurrentLo cation	TRUE/FALSE		Enable display of cur- rent location.
CONFIG	DefaultNearMeRa dius	<number></number>		Default value of near me radius if Near Me feature is enabled in EnableNearMe param- eter.
CONFIG	DefaultNearMeUn its	Mi/KM		Default value of near me radius unit if Near Me feature is enabled in EnableNearMe pa- rameter.
CONFIG	RoutingURL	The following is an ex- ample of a URL put into your server ID:		Routing URL to be set if Field Opera- tions Worker compo- nent (FOW) is enabled.
		https:// utility.arcgis. com/usrsvcs/		
		servers/ <id of="" server="">/rest/</id>		
		services/World/ Route/NAServer/ Route_World		
CONFIG	GefUIProfileId	<profile as="" id="" set<br="" value="">in GEF config></profile>		GEF profile id
CONFIG	EnableGef	TRUE/FALSE		Enable GEF as map data provider.

3.4.1.2 Configuring Your GIS Mapping Table

Use the /SMFND/GIS_OIDMAP_UPLOAD_PROG program to upload object values to the /SMFND/OID01_GS mapping table.

• SPATIAL_OBJECTID: Esri field

(i) Note

You can maintain either the SPATIAL_OBJECTID field or the SPATIAL_GUID field, or both. However, it is recommended that you maintain the SPATIAL_OBJECTID field.

- SPATIAL_GUID: Esri field
- **OBJKEY:** SAP key (for example, FLOC or EQ, depending on OBTYP)
- OBJECT_GROUP / OBJECT_GROUP1: SAP fields that allow for extra attributes or segregation

3.4.1.3 Supporting Authenticated GIS Services

Use

You can view token-based authenticated basemaps and feature layers on the mobile client. Use the ConfigPanel to configure the client ID and client secret strings.

Configuring Authenticated GIS Services

The mobile client retrieves the tokens. The client ID and client secret are supplied to the client so each client can generate their tokens for accessing authenticated services.

If your organization wishes to access Esri application-level authenticated GIS services, configure the SAP Service and Asset Manager application as shown in the following procedure.

You can also configure a proxy through Esri. Authenticated basemaps and feature layers are requested through a local proxy. The proxy manages the generation and use of tokens based on the client ID and client secret. For more information on configuring a proxy, see the Esri documentation, Working with Proxy Services *P*.

To turn on GIS authenticated services in the ConfigPanel, add the following rule:

- From the ConfigPanel Home page, navigate to OData Mobile Data Configuration OData Mobile Data Object List Data Filter Tab SAP_ASSET_MANAGER_<XX> SAM2310_GIS_MAP_CONTROL
 Operation READ Data Distribution INI_PARAMETER .
- 2. Click the *Change* button. In the *Rule List* section, click the *Add* button to add a new rule. The rule gives you the freedom to retrieve your client credentials in a manner appropriate for your organization:
 - Parameter Group: AUTHENTICATION
 - Parameter Name: ConfigRule
 - **Parameter Value:** /SAPAssetManager/Rules/Path/To/A/Rule.js The specified rule must return a json object in the form of the following example. Be sure to replace the text in the sample code with your actual client ID and client secret ("YourClientId" and "YourClientSecret"):

↔ Sample Code

```
{

"ClientId": "YourClientId",

"ClientSecret": "YourClientSecret"
```

3.4.1.4 Creating and Configuring an RFC Destination for Offline Maps

Establish an oAuth connection using a secure TokenID to request offline maps information from the ArcGIS server.

Context

The oAuth 2.0 client ID and secret for your connection are stored in the RFC destination. Maintain the RFC destination in the app parameters in the ConfigPanel.

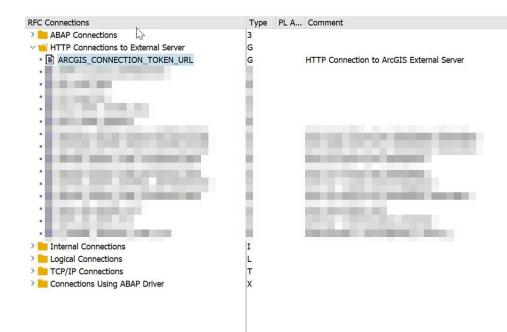
See the following screenshot for the parameter that is included in the out of the box SAP Service and Asset Manager application:

Gene	ral Mobile S	itatus Setting	Conversion Exit Se	tting	System Components	Parameters	Client Globals	User Attributes						
Mobil	e Application	Info												
Mol	bile Application:	SAP_ASSET_M	ANAGER_		Rel	ease:								
Mo	bile App. Desc.:	SAP Asset Man	ager											
Appli	cation Parame	ters												
F	arameter List													
	Import/Export	~												
	RecNo	Parameter Grou	ıp	7	Param. Name		Param. Value		∇	Scope	Dep. Re	Active	No Chan	Comment
		EXTERNALCON	NECTIONS		ARCGIS		ARCGIS_CONN	ECTION_TOKEN_URL		Application	0000000000	\checkmark		

The *OauthTokens* entity is provided out of the box to use for the RFC destination set in the *Parameters* tab. Use the following procedure to create the *ARCGIS_CONNECTION_TOKEN_URL* RFC destination in your backend system:

Procedure

1. Using the SAP GUI enter transaction *SM59* and enter *ARCGIS_CONNECTION_TOKEN_URL*, the new RFC destination.



2. From the *Technical Settings* tab of your new RFC connection, set the *Target Host* to match the ArcGIS server URL. Find the information for the Target Host field in the Service Host field on the *General Data* tab of the *Geospatial Service Definitions* page in the ConfigPortal. Set the *Path Prefix* to /sharing/rest/oauth2/token?.

O Note

3. If necessary, configure the proxy that you're using to allow your back end systems to connect to the internet.

RFC Destination	ARCGI	S_CONNECTION_TOKEN	I URL		
Connection Type		Connection to External S		Description	
Description			an 6361/	•	
Description 1	HTTP Conne	tion to ArcGIS External :	Server		
Description 2					
Description 3					
Administration	Technical Setting	Logon & Security	Special Options		
Target System Setting Target Host	ys www.arcgis	.com		Service No.	
Target System Setting	IS				
	www.arcgis	.com g/rest/oauth2/t	oken?	Service No.	
Target Host	www.arcgis		oken?	Service No.	
Target Host Path Prefix	www.arcgis		oken?	Service No.	
Target Host Path Prefix HTTP Proxy Options	www.arcgis /sharin		oken?	Service No.	
Target Host Path Prefix HTTP Proxy Options Global Configu	www.arcgis /sharin		oken?	Service No.	
Target Host Path Prefix HTTP Proxy Options Global Configu Proxy Host	www.arcgis /sharin		oken?	Service No.	
Target Host Path Prefix HTTP Proxy Options Global Configu	www.arcgis /sharin		oken?	Service No.	

- 4. Click the Logon & Security tab. Under Logon Procedure, select Basic Authentication. In the User Name field, enter the client ID. In the Password field, enter the client secret.
- 5. In the Security Options section of the Logon & Security tab, ensure that the SSL is set to Active.
- 6. Select your SSL certificate from the SSL Certificates list.
- 7. Save the connection and perform a connection test.

If the connection is configured correctly, a 200 HTTP response is returned.

8. Import the SSL certificate and ensure its active using transaction code STRUST.

3.4.1.4.1 Configuring GIS Offline Metadata

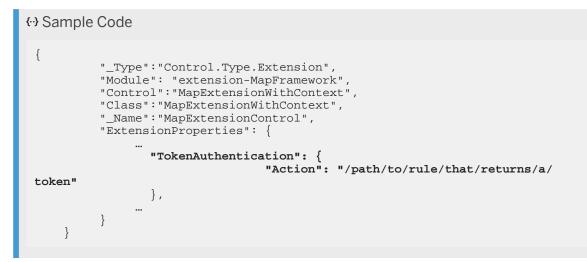
Create a new rule in the SAP Service and Asset Manager metadata to retrieve a valid authentication token for authenticated resources within the map control.

Context

To create a new rule for offline GIS, see the existing rule found in the metadata file of SAP Service and Asset Manager at /SAPAssetManager/Rules/Extensions/TokenRequest.js. The rule found there uses an online oData request to get the token from the back-end server. This rule is the recommended way to retrieve a token from the Esri oAuth service.

Procedure

- 1. Navigate to the metadata of your SAP Service and Asset Manager project using your preferred text editor or the SAP Web IDE and create a new rule.
- 2. Save the rule you created.
- 3. Open the .page file that contains your map control using your preferred text editor.
- 4. Navigate to the *Controls* section and locate the control for the map. The map control has the following specific properties:
 - Type of Control.Type.Extension
 - Module of Extension-MapFramework
- 5. Add a *TokenAuthentication* object within the *ExtensionProperties* object of the control. Add an *Action* property of a rule to retrieve a valid authentication token as shown in the following example:



6. Save the page and update your application with the new metadata.

Results

The new metadata allows token authentication on your ArcGIS map when required.

3.4.2 Geographical Enablement Framework (GEF)

Geographical Enablement Framework (GEF) works as the foundation to extend business data with geometric attributes for SAP S/4HANA. GEF is integrated directly into your SAP S/4HANA system.

As a framework leveraging the spatial capabilities inherent on the SAP S/4HANA platform, it enables organizations to develop geospatially enriched business data, and make them accessible from within SAP Service and Asset Manager.

SAP Service and Asset Manager uses the geometries (points, lines, and polygons) from the GEF geotables stored in SAP S/4HANA for the geo-enabled objects in the application. Users can view and work with base maps and feature layers on the device.

(i) Note

Esri base maps are the only base maps supported for the app.

For detailed information about GEF, including installation and implementation procedures, see the Geographical Enablement Framework documentation.

For information about configuring GIS, see the subtopics located in the Geographic Information System (GIS) [page 197] topic.

3.4.2.1 Disabling GIS

SAP Service and Asset Manager utilizes GEF by default. When implementing GEF, ensure that GIS is disabled in the ConfigPanel.

- 1. From the ConfigPanel home page, navigate to *Geospatial Service Definitions*. Select your application release using the *Mobile Application Filter*. Expand the *Geospatial Mobile Services by App* tree in the left panel.
- 2. Uncheck the *Active* boxes from the following services:
 - <APPXX>_GIS_QUERY_EQUIPMENT
 - <APPXX>_GIS_QUERY_FLOC
 - <APPXX>_GIS_QUERY_NOTIFICATION
 - <APPXX>_GIS_QUERY_WORKORDER

3.4.2.2 Configuring Your Map Settings - GEF

Some GEF settings are standard with the initial SAP Service and Asset Manager application.

You can change any of the settings described in this topic to configure the application for your site.

O Note

You can also change the map setting metadata through the Mobile Development Kit. Note that if there are metadata differences, Mobile Development Kit changes override ConfigPanel changes.

Before enabling GEF, deactivate GIS if you previously had it activated. See the Disabling GIS [page 207] topic for more information.

Geospatial Service Definitions - General Data Tab

- 1. From the ConfigPanel home page, navigate to *Geospatial Service Definitions*. Select your application release using the *Mobile Application Filter*. Expand the *Geospatial Mobile Services by App* tree in the left panel.
- 2. Check the *Active* boxes from the following services:
 - <*APPXX*>_*GEF_QUERY_EQUIPMENT*
 - <*APPXX*>_*GEF_QUERY_FLOC*
 - <APPXX>_GEF_QUERY_NOTIFICATION
 - <APPXX>_GEF_QUERY_WORKORDER

(i) Note

If you are using custom GEF services, enable those rather than the standard GEF services.

3. Save your changes.

Geospatial Service Definitions - Parameters Tab

If you've mapped a custom business object to a GEF scenario using *SPRO* in the SAP GUI, you must also map the connection in the Config Panel.

- From the Config Panel home screen, navigate to Second Service Definitions Parameter Settings tab Select your application release, then select the GEF service you've customized in the Geospatial Services by Mobile App list.
- 2. Click the *Change* button.
- 3. In the Operation Parameter Settings section, navigate to Parameters for Service Operation Provider Operation QUERY Standard Parameter Parameter EAM Scenario .
- 4. In the Value Setting section, change the Parameter Value to your custom business object.
- 5. Save your changes.

OData Mobile Data Object Configuration - Data Filter Tab

 From the ConfigPanel Home page, navigate to OData Mobile Data Object Configuration Data Filter Tab <<SAMXX>_GIS_OBJECT_DATA Operation - READ Standard Filter GEOSERVICE_ID Click the Change button.

Ensure that any GIS objects are inactive. Ensure that the following objects are active:

- <*APPXX*>_*GEF_QUERY_EQUIPMENT*
- <APPXX>_GEF_QUERY_FLOC
- <*APPXX>_GEF_QUERY_NOTIFICATION*
- <APPXX>_GEF_QUERY_WORKORDER

O Note

If you have any custom OMDOs for GEF, enable those. If you have any custom OMDOs for GEF, enable those, rather than the standard GEF OMDOs.

- While still on the Data Filter tab with the <SAMXX>_GIS_OBJECT_DATA selected, navigate to Deration READ Data Distribution GIS_ASSIGNMENT_TYPE .
 Ensure the Range Value is set to 2 GEF Integration.
- By default, all basemaps are maintained. GEF uses information coming from SAP S/4HANA GEF APIs. When you activate GEF, all GIS configuration is invalid. Configure the following parameters for GEF:
 While still on the Data Filter tab, navigate to
 <SAMXX>_GIS_MAP_CONTROL > Operation READ > Data Distribution > INI_PARAMETER .

Ensure that the following parameters found in the CONFIG parameter group are configured for GEF:

- **GefUIProfileID**: Standard configuration is *EAMALL*. If you've customized this in the SAP GUI, select your customization.
- EnableGef: Set to True

Save your changes.

3.4.2.3 Configuring Pagination

You can configure the number of business objects with geometry information displayed per page.

Procedure

- 1. Navigate to metadata/definitions/Pages/Extensions/Map.page.
- 2. Change 100 to the number of business objects displayed per page as shown in the following example:

↔ Sample Code

```
"Controls": [
"ExtensionProperties": {
"ItemsPerPage": 100,
```

3.4.2.4 Enabling GEF Create and Update

SAP Service and Asset Manager supports GEF geometry download as well as GEF create and update.

Context

- **Create:** Supports the ability to create GEF point, line, and poly-line directly from the map and from the MAIF /MERP/CL_CORE_GIS_GEOSERV_GEF object handler.
- **Update:** Supports the ability to update GEF point, line, and poly-line directly from the map and from the MAIF /MERP/CL_CORE_GIS_GEOSERV_GEF object handler.

O Note

The update feature supports the ability to update a time-sensitive GEF coordinate. Currently, the create feature does not support time-sensitive geometry.

Procedure

- 1. In the ConfigPanel, navigate to the *OData Mobile Data Object Configuration* section and find OMDO **SAM2310_GIS_OBJECT_DATA**. Click the *Data Filter* tab.
- 2. Click the Change button.
- 3. Expand the Defined Filters list to show and change the following
 - a. Deration CREATE Standard Filter GEOSERVICE_ID* . Perform the following actions:
 - Uncheck the Active flag for all GIS rules.
 - Check the Active flag for all GEF rules.
 - b. Deration READ Standard Filter GEOSERVICE_ID* . Perform the following actions:
 - Uncheck the Active flag for all GIS rules.
 - Check the *Active* flag for all GEF rules.
 - c. Deration UPDATE Standard Filter GEOSERVICE_ID* . Perform the following actions:
 - Uncheck the Active flag for all GIS rules.
 - Check the Active flag for all GEF rules.
- 4. Staying in the SAM2310_GIS_OBJECT_DATA oMDO, navigate to Operation READ Data Distribution
 GIS_ASSIGNMENT_TYPE* Select 2 GEF Integration and be sure the Active flag is checked.
- Move to the SAM2310_GIS_MAP_CONTROL oMDO and navigate to Operation READ Data Distribution INI_PARAMTER* Check the Active flag for the EnableGef parameter found in the CONFIG parameter group.
- 6. From the ConfigPanel home page, navigate to *Geospatial Service Definitions*. Select your application release using the *Mobile Application Filter*. Expand the *Geospatial Mobile Services by App* tree in the left panel. Ensure that the following services are active in the *General* tab:

- SAM2310_GEF_ADD_EQUIPMENT
- SAM2310_GEF_ADD_FLOC
- SAM2310_GEF_ADD_NOTIFICATION
- SAM2310_GEF_ADD_WORKORDER
- SAM2310_GEF_UPDATE_EQUIPMENT
- SAM2310_GEF_UPDATE_FLOC
- SAM2310_GEF_UPDATE_NOTIFICATION
- SAM2310_GEF_UPDATE_WORKORDER
- 7. *Save* your changes.

3.5 Push Framework Settings Procedures

3.5.1 Configuring Push for Work Order Assignment Type 1

Context

O Note

Push configuration is available for SAP Service and Asset Manager for Android starting with the 4.0 release.

Event-based push is supported for assignment types 1 (header-level person responsible for the work order) and 2 (operation-level personnel number of the work order). You can only configure push for one work order assignment type at a time.

By default, work order push is enabled for whichever assignment type your work order OMDO is set to. You can manually assign the *WO_ASSIGNMENT_TYPE* filter for your data distribution model to *1* or *2* to set a push assignment type different to the assignment type of the work order data distribution.

Procedure

- In the ConfigPanel, navigate to the OData Mobile Data Object Configuration section and find OMDO SAM2310_WORK_ORDER_GENERIC. Ensure the filter WO_ASSIGNMENT_TYPE is set to 1 on the Data Filter tab.
- 2. Return to the *Home* page of the ConfigPanel. Click the *Push Scenario Definition* link. Ensure that your mobileapplication is selected in the *Mobile Application Filter*.
- 3. Ensure the *Active* flag for the **SAM2310_EMERGENCY_WORKORDER_PUSH** scenario on the *General Data* tab is checked. Note that you can have both work order and notification pushes marked as Active because they are separate objects.
- 4. Make sure the configuration in the Source Setting and Distribution Setting sections are correct. By default, the <Source Object> for the work order operation push is the exchange object SAM2310_WORK_ORDER_PUSH with the <Distribution Object> SAM2310_WORKORDER_PUSH.

- Return to the ConfigPanel Home page, then navigate to the EFI Assignment section. In the Enhancement Implementation Includes list, select // MERP/EFI_PM // MERP/CL_PM_AUFNR_EFI_EVT .
- 6. Click the *Assignment* tab. Ensure the *Active* checkbox is checked for the exchange object **SAM2310_WORK_ORDER_PUSH**.

ConfigPanel Home	Mobile	Application Filter: SAP Asset N	fanager v			
Enhancement Implementation Includes 😞	EFI Assignment Detail (Display Mode)					
WMERPIEFLCA WinterpieFLCA WinterpieFLCA WinterpieFLCM WinterpieFLPM WinterpieFLPM WinterpieLPM_AUPINE_EFLEVT WinterpieLPM_AUPINE_EFLEVT WinterpieLPM_AUPINE_EFLEVT WinterpieLPM_WINT_EFLEVT WinterpieLPM_WINT_EFLEVT WinterpieLPM_WINT_EFLEVT WinterpieLPM_USSE_EFLEVT	Create Copy Delete General Assignment	Change EFI Type: EFI Event Handl went Handler: //MERP/CL_PM_ Description: EFI Event Handl Package: //MERP/EFL_PM	AUFNR_EFI_EVT ler: Work Order			
員 /MERP/CL_PM_MDOCM_EFI_EVT 員 /MERP/CL_PM_MELNR_EFI_EVT						
MERP/CL_PM_OBKNR_EFI_EVT	EFI Include Name	Mobile Application	Exchange Object	Exch. Object Desc.	Active Flag	Use In Linkage Processing Only
員 /MERP/CL_PM_QMNUM_EFI_EVT 員 /MERP/CL_PM_QPCD_EFI_EVT	/MERP/CL_PM_AUFNR_EFI_EVT	SAP_ASSET_MANAGER_	SAMWORK_ORDER	Work Order Exchange	\checkmark	
MERP/CL_PM_SERIAL_EFI_EVT	/MERP/CL_PM_AUFNR_EFI_EVT	SAP_ASSET_MANAGER_	SAM WORK_ORDER_OPERATION_PUSH	Work Order Operation Push xChange		
MERP/CL_PM_TPLNR_EFLEVT MERP/EFL_VM MOD/EFLCA NSYCLO/CS	MERP/CL_PM_AUFNR_EFI_EVT	SAP_ASSET_MANAGER_	SAM WORK_ORDER_PUSH	Work Order Push xChange	V	
	Assignment Detail					
	Mobile Application: SAP Asset Mana Exchange Object: SAMWORK_ Exch. Object Desc.: Work Order Push	ORDER_PUSH - Work Orde	Use In Linkage Processing Only:			

7. Save your changes.

3.5.2 Configuring Push for Work Order Assignment Type 2

Context

Note

Push configuration is available for SAP Service and Asset Manager for Android starting with the 4.0 release.

Event-based push is supported for assignment types 1 (header-level person responsible for the work order) and 2 (operation-level personnel number of the work order). You can only configure push for one work order assignment type at a time.

By default, work order push is enabled for whichever assignment type your work order OMDO is set to. You can manually assign the *WO_ASSIGNMENT_TYPE* filter for your data distribution model to *1* or *2* to set a push assignment type different to the assignment type of the work order data distribution.

Procedure

 In the ConfigPanel, navigate to the OData Mobile Data Object Configuration section and find OMDO SAM2310_WORK_ORDER_GENERIC. Ensure the filter WO_ASSIGNMENT_TYPE is set to 2 on the Data Filter tab.

- 2. Return to the *Home* page of the ConfigPanel. Click the *Push Scenario Definition* link. Ensure that your mobileapplication is selected in the *Mobile Application Filter*.
- 3. Ensure the *Active* flag for the **SAM2310_EMERGENCY_WORKORDER_PUSH** scenario on the *General Data* tab is checked. Note that you can have both work order and notification pushes marked as Active because they are separate objects.
- 4. Make sure the configuration in the Source Setting and Distribution Setting sections are correct. By default, the <Source Object> for the work order operation push is the exchange object SAM2310_WORK_ORDER_PUSH with the <Distribution Object> SAM2310_WORKORDER_PUSH.
- 5. Return to the ConfigPanel Home page, then navigate to the *EFI Assignment* section. In the *Enhancement Implementation Includes* list, select // *MERP/EFI_PM* // *MERP/CL_PM_AUFNR_EFI_EVT*.
- 6. Click the *Assignment* tab. Ensure the *Active* checkbox is checked for the exchange object **SAM2310_WORK_ORDER_OPERATION_PUSH**.

ConfigPanel Home	Mobile	Application Filter: SAP Asset N	lanager ~			
Enhancement Implementation Includes 😞	EFI Assignment Detail (Display Mode)					
	Create Copy Delete	Change				
SMLERP/EFL_PM ■ MERPICL_PM_ARPPL_EFL_EVT ■ MERPICL_PM_AUFINE_EFL_EVT ■ MERPICL_PM_EUSP_EFL_EVT ■ MERPICL_PM_EOUNR_EFL_EVT ■ MERPICL_PM_KINNT_EFL_EVT ■ MERPICL_PM_SSN_EFL_EVT ■ MERPICL_PM_SS	EFI Assignment List	EFI Type: EFI Event Handl vent Handler: //MERP/CL_PM_ Description: EFI Event Handl Package: //MERP/EFL_PM	AUFNR_EFI_EVT			
MREP/CL_PM_MELNR_EFI_EVT	EFI Include Name	Mobile Application	Exchange Object	Exch. Object Desc.	Active Flag	Use In Linkage Processing Only
員 /MERP/CL_PM_OBKNR_EFI_EVT 員 /MERP/CL_PM_QMNUM_EFI_EVT	/MERP/CL PM AUFNR EFI EVT		SAM WORK ORDER	Work Order Exchange	√	
	/MERP/CL_PM_AUFNR_EFI_EVT			Work Order Operation Push xChange		
/MERP/CL_PM_TPLNR_EFI_EVT	/MERP/CL_PM_AUFNR_EFI_EVT	SAP_ASSET_MANAGER_	SAM WORK_ORDER_PUSH	Work Order Push xChange	~	
> 御 /MERP/EFL_WM > 御 /NFCLO/CCA > 御 /SYCLO/CCS > 御 /SYCLO/MM						
	Assignment Detail					
	Mobile Application: SAP Asset Mana	ger				
	Exchange Object: SAMWORK_	ORDER_PUSH - Work Orde				
	Exch. Object Desc.: Work Order Push	-				
	Active Flag:	AUFNR_EX_HNDLF	Use In Linkage Processing Only:			
	Acuve Flag.		Use in Linkage Processing Only.			
	Administrative Info					
	Created By:	Creation Time Stamp:				
	Last Changed By:	Changed Time Stamp:				

7. Save your changes.

3.5.3 Configuring Push for Notification Assignment Types 1 -5

Context

Event-based push is supported for notification assignment types 1 through 5. You can only configure push for one notification assignment type at a time.

By default, notification push is enabled for whichever assignment type your notification OMDO is set to. You can manually assign the *NOTIF_ASSIGNMENT_TYPE* filter for your data distribution model to 1, 2, 3, 4 or 5 to set a push assignment type different to the assignment type of the notification data distribution.

Procedure

- 1. In the ConfigPanel, navigate to the *OData Mobile Data Object Configuration* section and find OMDO **SAM2310_NOTIFICATION_GENERIC**. Ensure the filter *NOTIF_ASSIGNMENT_TYPE* is set to the assignment type of your choice (*1* 5) on the *Data Filter* tab.
- 2. Return to the *Home* page of the ConfigPanel. Click the *Push Scenario Definition* link. Ensure that your mobile application is selected in the *Mobile Application Filter*.
- 3. Ensure the *Active* flag for the **SAM2310_EMERGENCY_NOTIFICATION_PUSH** scenario on the *General Data* tab is checked. Note that you can have both work order and notification pushes marked as Active because they are separate objects.
- 4. Make sure the configuration in the Source Setting and Distribution Setting sections are correct. By default, the <Source Object> for the notification push is the exchange object SAM2310_NOTIFICATION_PUSH with the <Distribution Object> SAM2310_NOTIFICATION_PUSH.
- 5. Return to the ConfigPanel Home page, then navigate to the *EFI Assignment* section. In the *Enhancement Implementation Includes* list, select // *MERP/EFI_PM* // *MERP/CL_PM_QMNUM_EFI_EVT*.
- 6. Click the *Assignment* tab. Ensure the *Active* checkbox is checked for the exchange object **SAM2310_NOTIFICATION_PUSH**.

ConfigPanel Home		Mobile Applica	ation Filter: S.	AP Asset Manager	×			
Enhancement Implementation Includes 😞	EFI Assignment Detail ((Display Mode)						
> 御/MERP/EFL_CA > 御/MERP/EFL_CO > 御/MERP/EFL_MM ◇ 御/MERP/EFL_PM	Create Copy General Assig	gnment	🖉 Change					
WINDONED'S MARKEN, SELEVT MIREP/CL_PM_ARBPL_EFLEVT MIREP/CL_PM_AUFNR_EFLEVT MIREP/CL_PM_AUSN_EFLEVT MIREP/CL_PM_AUSN_EFLEVT MIREP/CL_PM_MISSK_EFLEVT MIREP/CL_PM_MISSK_EFLEVT MIREP/CL_PM_MISSK_EFLEVT	EFI Assignment I	I	ent Handler: Description:	EFI Event Handler /MERP/CL_PM_QI EFI Event Handler: /MERP/EFI_PM				
員 /MERP/CL_PM_MELNR_EFI_EVT 員 /MERP/CL_PM_OBKNR_EFI_EVT	EFI Include Name	e	Mobile Appli	cation	Exchange Object	Exch. Object Desc.	Active Flag	Use In Linkage Processing Only
		QMNUM_EFI_EVT			SAM1911_NOTIFICATION	Notification Exchange Notification Push xChange	✓ ✓	
MERPICL_PM_TPLNR_EFI_EVT WMERPIEFI_WM WMENDIEFI_CA W9 MENDIEFI_CA W9 SYCLOICS W9 SYCLOIMM								
	Assignment Deta	ail						
	Mobile Application: Exchange Object: Exch. Object Desc.:	SAP Asset Manage SAM1911_NOTIFI Notification Push x /MERP/CL_PM_QI	CATION_PUS Change		Use In Linkage Processing Only:]		

7. Save your changes.

3.5.4 Setting up the Outbound Trigger for your Push Configuration

Context

O Note

Push configuration is available for SAP Service and Asset Manager for Android starting with the 4.0 release.

Procedure

- 1. From the ConfigPanel *Home* page, navigate to the *Outbound Trigger Configuration* section and select your desired mobile application from the *Mobile Application Filter* dropdown menu at the top of the page.
- From the Outbound Triggers by Mobile App list, select the outbound trigger
 SAM2310_WORKORDER_TRIGGER_SCPMS. Make sure that the <Cloud Platform Mobile App ID> matches your mobile services application ID from SAP Business Technology Platform Mobile Services. By default, the application ID is set to com.sap.<appXX>.oauth.prod.
- 3. Set up the RFC destination **SAM2310_SCPMS_PUSH_NOTIFICATION** pointing to the mobile services host name using the SAP GUI:
 - a. In the SAP GUI, using transaction *SM59*, add the following new RFC destination: **SAM2310_SCPMS_PUSH_NOTIFICATION** of type *G* (*HTTP Connection to External Serv*)

	RFC Connections	Туре	PL	Comment
	> 🗅 ABAP Connections	3		
		G		
		G		
		G		
		G		
	SAM20_SCPMS_PUSH_NOTIFICATION	G		SAM 2.0 SCPms Push Notification Destination
	SAM20_SCPMS_PUSH_NOTIFICATION_D	G		SAM 2.0 SCPms Dev Push Notification Destination
	SAM30_SCPMS_PUSH_NOTIFICATION	G		SAM 3.0 SCPms Push Notification Destination
	SAM30_SCPMS_PUSH_NOTIFICATION_D	G		SAM 3.0 SCPms Dev Push Notification Destination
	SAM30_SCPMS_PUSH_NOTIFICATION	G		
	SAM30_SCPMS_PUSH_NOTIF_	G		SAM 3.0 SCPms Dev Push Notification Destination -
✓	SAM40_SCPMS_PUSH_NOTIFICATION	G		SAM 4.0 SCPms Push Notification Destination
	SAM40_SCPMS_PUSH_NOTIFICATION_D	G		SAM 4.0 SCPms Dev Push Notification Destination
	SAM_AIN_DEMO_SYS	G		AIN Demo System
	SAM_AIN_DEV_SYS	G		AIN Dev - SAM(including checklist)
	> 🗅 Internal Connections	1		
	> 🗅 Logical Connections	L		
	> TCP/IP Connections	т		
	> 🗅 Connections Using ABAP Driver	х		

b. On the *Technical Settings* tab of the new connection, set the *Target Host* to match the push API of the SAP Business Technology Platform Mobile Services. Use service number *443*, which is the port number of the HTTPS connections.

O Note

If necessary, configure the proxy that you are using to allow your back-end systems to connect to the Internet.

RFC Destination	
Connection Type:	G HTTP Connection to External Serv Description
Description	
Description 1: S	AM SCPms Push Notification Destination
Description 2:	
Description 3:	
Administration Technic	cal Settings Logon & Security Special Options
Target System Settings	
Target Host:	int.sap.hana.ondemand.com Service No.: 443
	(nactuatification (application (com cap cam aputh (ucap
Paul Pienz.	/restnotification/application/com.sap.sam .oauth/user
Paul Plenk.	/restnotification/application/com.sap.sam .oauth/user
	/restnotification/application/com.sap.sam .oauth/user
HTTP Proxy Options	/restnotification/application/com.sap.sam .oauth/user
HTTP Proxy Options	n
HTTP Proxy Options	on .t:
HTTP Proxy Options Global Configuration Proxy Hos	on .t: e: 8080
HTTP Proxy Options Global Configuration Proxy Hos Proxy Service	on tt e: 8080 r:

- c. On the Logon & Security tab, under the Logon Procedure, select Basic Authentication. Enter the user name and password of the service user. Assign the Notification User role to this service user in the SAP Business Technology Platform Mobile Services configuration to ensure that the user is allowed to utilize the push notification service.
- d. In the Security Options section of the Logon & Security tab, ensure that the SSL is set to Active.
- e. In the *Security Options* section, ensure that the *SSL Certificate List* contains the SAP Business Technology Platform certificate chain. You can check the certificate chain at the SSL client certificate list with the *STRUST* transaction. Display the SAP Business Technology Platform Mobile Services certificate chain in any web browser by opening the SAP Business Technology Platform Mobile Services cockpit and checking the security settings.
- f. Save the connection and perform a connection test. If the configuration is completed properly, a 200 HTTP response is returned.
- g. In the *Technical Settings* tab, add the rest of the path for the PUSH API in *Path Prefix* to allow the POST operation to work properly.
- 4. In the ConfigPanel, return to the *Outbound Trigger Configuration* panel, *General Data* tab, if you are not already there. Check the outbound trigger configuration to ensure that the previously established *HTTP RFC Destination* is set as the RFC destination to the proper mobile application. This configuration ensures that push notifications reach the right mobile application user.

General Data Parameters Basic Data			
Basic Data Outb. Trigger Id SAM. WORKORDER_TRIGGER_SCPMS Outb. Trigger Identifies SAP Asset Manager Trigger Handler Info Outb. Trigger Type: MATPORE_OFMS_PUSH. HTTP outboand trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Type: HTTP REC Destination Outb. Trigger Type: HTTP REC Destination Outb. Trigger Type: Push Processing Outper HTTP REC Destination Outb. Trigger Handler Outb. Trigger Type: Push Processing Outper HTTP REC Destination Outper HTTP Outper HTTP Rec Destination Outper HTTP Outper HTTP Identifies Outper HTTP Ident Identifies Outper HTTP Identifies Outper HTTP Ident			
Outb. Trigger Id: SAM_WORKORDER_TRIGGER_SCPMS Outb. Trigger Id: Work Order Push Notification - SCPms Mobile Application: SAP Asset Manager Trigger Handler Info Outb. Trigger Type: IMFN0/CL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Type: IMTP based trigger HTTP RFC Destination: SAM_SCPMS_PUSH_NOTIFICATION : init sap hana.ondemand.com Cloud Platform Mobile App. Id: com sap sami_oauth Target Host Pute:	General Data	Parameters	
Outb. Trigger Desc. Work Order Push Notification - SCPms Mobile Application: SAP Asset Manager Trigger Handler Info Outb. Trigger Handler MFNDCL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Handler MFNDCL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Handler MFNDCL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Handler MFNDCL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Handler MFNDCL_CORE_OTRIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Type: Push Processing Type: Push Processing Type: Processing Type: Processing Type: Processing Type: Processing Type: Processing Type: Push Processing Type: Push Processing Type: Push Processing Type: Push Processing Type: Push Processing Type: Push Processing Type:	Basic Data		
Mobile Application: SAP Asset Manager Trigger Handler Info Outb. Trigger Type: IHTP Dasset Itigger Outb. Trigger Type: IHTP Dasset Itigger HTTP RFC Destination: SAM_SCPMS_PUSH_NOTFICATION: Intraget Host Name: Target Host Name: <td>Outb. Trigger Id:</td> <td>SAM _WORKORDER_TRIGGER_SCPMS</td> <td></td>	Outb. Trigger Id:	SAM _WORKORDER_TRIGGER_SCPMS	
Trigger Handler Info Outb. Trigger Type: MITP Decessing Type: ITTP RFC Destination: SAM SCPMS_PUSH_DUSH_CATION: Interpret Type: ITTP RFC Destination: SAM SCPMS_PUSH_COTFICATION: Interpret Type: Ittrepret Type: <tr< td=""><td>Outb. Trigger Desc.:</td><td>Work Order Push Notification - SCPms</td><td></td></tr<>	Outb. Trigger Desc.:	Work Order Push Notification - SCPms	
Outb. Trigger Handler: MFND/CL_CORE_OTNIG_CPMS_PUSH: HTTP outbound trigger - SCPms oData Push Notification Processing Type: Push Processing Outb. Trigger Type: HTTP BASed trigger HTTP RFC Destination: SAM_SCPMS_PUSH_NOTIFICATION : int sap hana ondemand com Cloud Platform Mobile App. ldt com sap sam_oaulh Target Host Prot No: 00000 URL Identifier Type: IP Address Web Protocci: ITTP Min. Conn. Time(Sec): 0 Check Response: Parameter: Allow Retry: 10 Retry Walt Period (Seconds): 0 Activation Activation Activation Created By: Creation Time Stamp:	Mobile Application:	SAP Asset Manager	
Outb. Trigger Type: HTTP based trigger HTTP RFC Destination: SAM_SCPMS_PUSH_NOTFICATION: Int sap hana ondemand.com Cloud Platform Mobile App. Id: Coud Platform Mobile App. Id: Target Host Name: Target Host No: 00000 URL Identifier Type: IP Address Web Protocot: HTTP Min. Conn. Time(Sec): 0 Check Response: Parameter: Alow Retry: 10 Retry Wait Period (Seconds): 0 Active Flag: Created By:	Trigger Handler	Info	
HTTP RFC Destination: SAM_SCPMS_PUSH_NOTIFICATION: int sap hana ondemand.com Cloud Platform Mobile App. Id: com sap sam_oauth Target Host Name:	Outb. Trigger	Handler: /MFND/CL_CORE_OTRIG_CPMS_PUSH : HTTP outbound trigger - SCPms oData Push Notification	Processing Type: Push Processing
Cloud Platform Mobile App. Id: com sap.sam_oauth Target Host Name: Target Host Name: Target Host Name: Target Host Not: 00000 URL Identifier Type: IP Address Web Protocot. HTTP Min. Conn. Time(Sec): 0 Check Response: Parameter: Parameter: Retry Setting Allow Retry: 10 Retry Wait Period (Seconds): 0 Activation Active Flag: Administrative Info Created By: Creation Time Stamp:	Outb. Trigg	er Type: HTTP based trigger	
Target Host Name: Target Host Name: Target Host Pit Target Host Pit Target Host Pit Output URL Identifier Type: IP Address Web Protoco: HTTP Min. Conn. Time(Sec): 0 Check Response: Image: Parameter: Output Allow Retry: Image: Image: </td <td>HTTP RFC Des</td> <td>stination: SAM _SCPMS_PUSH_NOTIFICATION : int.sap.hana.ondemand.com</td> <td></td>	HTTP RFC Des	stination: SAM _SCPMS_PUSH_NOTIFICATION : int.sap.hana.ondemand.com	
Target Host IP: Target Host Price URL Identifier Type: IP Address Web Protoco: HTTP Min. Conn. Time(Sec): 0 Check Response: Parameter: Retry Setting Allow Retry: III Retry Wait Period (Seconds): 0 Activation Active Flag: Image: Administrative Info Creation Time Stamp:	Cloud Platform Mobile	App. Id: com.sap.sam .oauth	
Target Host Port No.: 00000 URL Identifier Type: IP Address Web Protoco: HTTP Min. Conn. Time(Sec): 0 Check Response: Image: Contract Con	Target Hos	st Name:	
URL Identifier Type: IP Address Web Protoco: HTTP Min. Conn. Time(Sec): 0 Check Response: Image: Contract of the stamp: Co	Target		
Web Protoco: HTTP Min. Com. Time(Sec): 0 Check Response: Parameter: Retry Setting Allow Retry: Maximum No. of Retry: 10 Retry Wait Period (Seconds): 0 Activation Active Flag: Administrative Info Creation Time Stamp:			
Min. Conn. Time(Sec):			
Check Response: Parameter: Parameter: Retry Setting Allow Retry: Maximum No. of Retry: 10 Retry Wait Period (Seconds): 0 Activation Active Flag: Administrative Info Creation By: Creation Time Stamp:			
Parameter: Retry Setting Allow Retry: Maximum No. of Retry: 10 Retry Wait Period (Seconds): 0 Activation Active Flag: Administrative Info Creation Time Stamp: Creation Time Stamp:			
Retry Setting Allow Retry: Maximum No. of Retry: 10 Retry Walt Period (Seconds): 0 Activation Active Flag: Administrative Info Creation By: Creation Time Stamp:			
Allow Retry: Allow Retry: Allow Retry: Allow Retry: Allow Retry: Allow Retry: Allow Faty: Creation Time Stamp: Creation Time Stamp:			
Maximum No. of Retry: 10 Retry Wait Period (Seconds): 0 Activation Active Flag: ✓ Administrative Info Creation By: Creation Time Stamp:	Retry Setting		
Activation Active Flag: Active Flag: Active Info Created By: Creation Time Stamp:	Allow Retry		
Active Flag: Administrative Info Created By: Creation Time Stamp:	Maximum No. of Retry	r: 10 Retry Wait Period (Seconds): 0	
Active Flag: Administrative Info Created By: Creation Time Stamp:	A -41		
Administrative Info Created By: Creation Time Stamp:			
Created By: Creation Time Stamp:	Active Flag:		
	Administrative I	nfo	
Last Changed By: Changed Time Stamp:	Created By:	Creation Time Stamp:	
	Last Changed By:	Changed Time Stamp:	

- 5. On the *Parameters* tab, set parameter *SCPMS_WITH_SAP_USER_ID* to *True* if the SAP Business Technology Platform user store is the same as the back end user store, that is, if you use the same mobile user for both SAP Business Technology Platform logon and back end logon. If the user store is not identical, set the parameter to *False* and update the mobile user setting as explained in the next step.
- 6. If parameter SCPMS_WITH_SAP_USER_ID is set to False, maintain the user mapping under User Management using the Admin portal in the SAP GUI:

O Note

On the first delta sync, the SAP Service and Asset Manager client automatically performs substeps *a*-*d* for you. If desired, you can still perform these substeps to verify that the push registration process has completed successfully.

- a. Using the SAP GUI, launch the Admin portal with transaction code /n/SYCLO/ADMIN. On the Admin portal home page, select Administration User Management . Make sure to select your desired mobile application in the Mobile Application Filter field at the top of the page. Choose Search to list all users for that application.
- b. Select *User ID* under *Search Result*, and click the *Client Registration Info* tab under the *Mobile User Detail* section. Choose *Change* from the menu bar.
- c. Enter the matching *CPms User Id* (using upper case) for the back end user name listed under this tab.
- d. Save your changes.
- 7. Return to the *Home* page of the ConfigPanel. Select the *Push Scenario Definition* page. Under *Push Scenarios by Mobile App* list, select the desired push scenario definition. Click the *Outbound Trigger* tab and ensure that the proper outbound trigger is assigned and active for the push scenario.

3.5.5 Activating Default Push Services for SAP Service and Asset Manager - Neo

Prerequisites

O Note

The SAP Service and Asset Manager Installation Guide is a guide to setting up the basic framework necessary for push services using the default settings. For more details regarding configuration of push services, see the topic.

Before performing the procedure, ensure the following:

- SAP Service and Asset Manager application on the device is running on Mobile Development Kit 2.2.001
- You have installed SAP Service and Asset Manager 2310
- You have installed either SAP Mobile Add-On ECC or SAP Mobile Add-On for SAP S/4HANA. See the following installation guides on the following portal pages for version information:
 - SAP S/4HANA Mobile Add-On
 - SAP Mobile Add-On ECC

Context

To configure and activate push for the Android platform, see the Configuring Push for Android [page 234] procedure.

Procedure

- 1. Configure the SAP Business Technology Platform Mobile Services push API:
 - a. Enable the Push Notification feature in SAP BTP services:

E SAP			Mobile Service for Development and Operations - Preview							
分 Home	NativeHybrid / SA	P_Asset_Manager_10_PProp								
3 Mobile Applications ~	🚫 847-Ased, Manger, 10, PFrog(con.exp.sam10.grop)									
Nativo/Hybrid	Const Factor Relation Station									
SAP Content to Go	nests extern	Publish to Discovery service								
Features										
Destinations	Info APIs	User Registrations Usage Analytics Blocked Users	Add Feature							
🖞 Analytics 🔷 🗧	Applicatio									
'g Settings →	Applicatio	Search	9	State						
0 comp		Name	Description	CK OK						
		 Access Control 	Enable role checking and application version checking.	C OK						
		 Client Resources 	Add client resources to an application.	⊡ ok						
		 Document Repository 	Enable access to the document repository without registering.	C OK						
		 JSON Storage 	Enable persistence of application-specific data.	C OK						
		Push Notification	Register devices to receive native push notifications.							
		 Sample Back End 	Use the sample service during development and testing.							
		O Cloud Build	Build Custom Fiori Clients for your SAP Fiori business apps.							
			OK Canool							

b. Navigate to the *Push Notification* in the mobile app and create a new HTTP connection to your external server named *Assigned Features*:

ı	Assigned Features			+
	Name		State	
	St App Update		[∕ ок	>
	බ Client Policies		[⊻ ок	>
	⊗ Connectivity		[⊻ ок	>
	°₂ Offline		[⊻ ок	>
	Push Notification	<pre>tip</pre>	[⊻ ок	>
	Security	w .	[⊻ ок	>

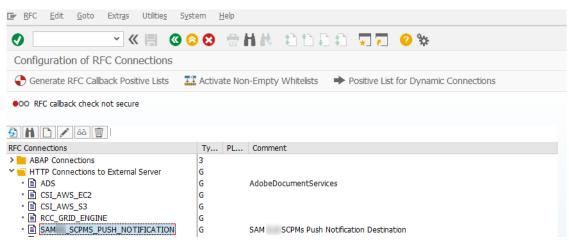
c. If you are using a custom deployment of SAP Service and Asset Manager, upload the corresponding APNs certificates here. If you are using the default application provided by the Apple App or the Google Play store, select *Predefined for* SAP Service and Asset Manager in the *Predefined Global Push Configuration* section.

Native/Hybrid / ijustneedscreenshots / Push Notification	
C Push Notification	
Save Reset Remove from Application	
Configuration Infe	
Push Text Messages (SMS)	Predefined Global Push Configuration
Enable Text Messages (SMS):	Predefined for:
Apple	Android SAP Fiori Client SAP Conta
APNS Endpoint: None 🗸	Server Key: SAP Mobile Services Client
	*Gender ID: SAP Asset Manager
BlackBerry	WNS
Push Type: None v	Package SD: Client Secret
	LUAR SECRE
MPNS	
Enable MPNS HTTP Push:	

The SAP Business Technology Platform Mobile Services is configured for push.

2. Configure the back-end system to utilize the SAP BTP services push APIs:

a. Using the SAP GUI, run transaction *SM59*. Create a new HTTP connection with the name *SAM2310_SCPMS_PUSH_NOTIFICATION*.



b. In the *Technical Settings* and tab of the new connection, set the *Target Host* to match the push API of the SAP BTP services, using 443 (the port number for HTTPS connections).

<u>Connection</u>	<u>E</u> dit	<u>G</u> oto	Extr <u>a</u> s	Utilitie <u>s</u>	System	<u>H</u> elp		
•		~	« 🖪	🔇 🔕	8 🖶	HA	看台	11
RFC Destinat	ion C	LOUD	_PLATF	ORM_C	ONNECT	ION		
Connection T	est	62						
RFC Destination		CLOU	D_PLATFO	RM_CONN	ECTION			
Connection Type	G	HTTP	Connectio	on to Exter	nal Serv	Descr	iption	
Description								
Description 1	Clou	ud Platfo	orm Conne	ection				
Description 2								
Description 3								
Administration	Т	echnical	Settings	Logor	& Security	Special	Options	
Target System S	Setting	5 5						
Target Host		-	-		-	S	ervice No.	443
Path Prefix	Í			•	Γ			1
					-			
HTTP Proxy Opt	tions							
Global Confid	uration							

(i) Note

If necessary, configure the proxy you are using to allow your back end to connect to the outside internet.

- c. Click the *Logon & Security* tab. Under the *Logon Procedure*, select *Basic Authentication*. Enter the user name and password of a service user.
- d. In SAP Business Technology Platform, ensure your service user has the role of *Notification User* assigned to them to ensure that the user is allowed to utilize the SAP BTP services API. The service user must be a member of the SAP Business Technology Platform account.

An Service Configuration: Configure Development & Operations

Roles (All: 9)
E New Role
Name
AdminImpersonator
Microservice
Notification User
Developer
C2GSubscriptionManager
Notification User Predefined: Provisioned by the application
Individual Users Assign Unassign All

- e. In the Security Options section of the Logon & Security tab, ensure that the <SSL Secure Protocol> is set to Active.
- f. Remaining in the *Security Options* section, ensure that the *SSL Certificate List* used contains the SAP Business Technology Platform certificate chain and is active.

<u>Connection</u> <u>E</u> dit	<u>G</u> oto Extr <u>a</u> s Utilitie <u>s</u>	System <u>H</u> elp
•		🖸 🗇 🗛 🚯 🗅 💭 💭 🔽 🔽
RFC Destination (CLOUD_PLATFORM_C	
Connection Test	69.	
RFC Destination	CLOUD_PLATFORM_CONN	ECTION
Connection Type G		
Description		•
Description 1	oud Platform Connection	
Description 2		
Description 3		
Administration	Technical Settings Logon	& Security Special Options
		<u></u>
Logon Procedure		
Logon with User		
O Do Not Use a Use	r	
Basic Authenticati	ion	
User		
PW Status		
Password ***	*****	*************
Logon with Ticket		
Do Not Send Logo	on Ticket	
	et Without Ref. to a Target S	vstem
	icket for Dedicated Target Sys	
System ID	Client	stem
System ID	Cilette	
Security Options		
Status of Secure Pro	itocol	
SSL	O Inactive 💿	Active
SSL Certificate	DFAULT SSL Client	
Authorization for Dest	ination	
		-

Check the certificate list of the SSL client by using the *STRUST* transaction. Check the matching trust list and ensure that the SAP BTP services certificate chains are in it.

<u>PSE E</u> dit <u>G</u> oto <u>C</u> ertificat	e En <u>v</u> ironment S <u>v</u> stem <u>H</u> elp
 <td>🖶 🔇 😂 🖶 🗄 🕼 🟥 🗅 🖨 💭 🌄 🌄 😵 🏵</td>	🖶 🔇 😂 🖶 🗄 🕼 🟥 🗅 🖨 💭 🌄 🌄 😵 🏵
Trust Manager: Display	
🦻 🕅	
> <mark> </mark>	SSL client SSL Client (Standar
	Own Certificate
	Subject
🖌 🚾 SSL client SSL Client (Standar	Issuer Certificates
•	
	·
	v
	☑ Trust issuer certificates
	Certifičate List
	民 Subject
	· ·
	S Verification PSE
	Certificate

View the SAP BTP services certificate chain in any web browser by opening up the SAP BTP services cockpit and checking the security settings.

🛶 🧱		
Certificate ^{Standard}	Issued by: DigiCert SHA2 Secure Server CA Expires: Standard Time Inis certificate is valid	Central
Details		

g. Save the connection and perform a connection test. If the configuration is completed properly, a 200 HTTP response is returned.

<u>Connection</u> Test	t <u>E</u> dit <u>O</u>	<u>S</u> oto S <u>v</u> st	em <u>H</u> elp			
0	~	«	@ (2) (2)	- -	H /4	和自认
Connection Te	est HTTP I	Destinatio	on CLOUD	_PLAT	FORM_	CONNEC
Destination	CLOUD_PLAT	FORM_CON	NECTION			
Ту.	HTTP Conne	ction to Exte	ernal Server			
Test Result	Response H	eader Fields	Respons	e Body	Respor	nse Text
Detail	Value					
Status HTTP Respo						
Status Text	ОК					
Duration Test Call	413 ms					
		_				

h. If the previous step correctly returned a status of *200*, add the rest of the path for the API to allow the POST to work properly.

	~ «	. 🔇 🔕 🤅	3 🕆 H	A わわ	D 10 9
RFC Destination	on SAM _SCP	MS_PUSH_N	OTIFICAT	[ON	
Connection Te	st 🔗				
RFC Destination Connection Type Description		MS_PUSH_NOTI ection to Externa	-] Description	
Description 1	SAM SCPms P	Push Notification	Destination		
Description 2					
Description 3					
Administration	Technical Settin	igs Logon (& Security S	pecial Options	
	ettings				
Target System Se					
Target System Se Target Host				Service No.	443

The back-end system can now send push notifications.

- 3. Configure the back end to enable push from the SAP Service and Asset Manager application:
 - a. Using the ConfigPanel, navigate to the *Outbound Trigger Configuration* panel, *General Data* tab. Check the outbound triggers to ensure that the previously established *HTTP RFC Destination* is set as the RFC destination to the APPID that provides the push notifications to the mobile devices.

ConfigPanel Home		Mobile Application Filter: SAP Asset Manager	~
	Dutbound Trigger Detail (D	isplay Mode)	
SAP_ASSET_MANAGER_	Create Copy	Delete 🥖 Change	
SAM _WORKORDER_TRIGGER_SCPMS	General Data	Parameters	
	Basic Data		
	Outb. Trigger Id: SA	WORKORDER_TRIGGER_SCPMS	
	Outb. Trigger Desc.: Wo	k Order Push Notification - SCPms	
	Mobile Application: SA	Asset Manager	
	Trigger Handler Int	0	
	Outb. Trigger Han	ler: /SMFND/CL_CORE_OTRIG_CPMS_PUSH : HTTP outbound trigger - SCPms oData Push Notification	Processing Type: Push Processing
	Outb. Trigger T	pe: HTTP based trigger	
	HTTP RFC Destina	on:	
	Cloud Platform Mobile App	ld: com.sap.sam .oauth	
	Target Host Na	ne:	
	Target Hos	IP:	
	Target Host Port		
	URL Identifier T		
	Web Proto		
	Min. Conn. Time(S		
	Check Respo Param		
	Param	ler.	
	Retry Setting		
	Allow Retry:		
	Maximum No. of Retry:	10 Retry Wait Period (Seconds): 0	

b. Click the *Parameters* tab. If your user store on the back end and user store on the SAP Business Technology Platform are identical, set the *SCPMS_WITH_SAP_USER_ID* parameter value to *True*. If the user stores are not identical, set the parameter to *False*.

ConfigPanel Home		Mobile Application Filter: SA		
Comgranerhone		Mobile Application Filter: SA	AP Asset Manager	~
Outbound Triggers By Mobile App 🛛 😞	Outbound Trigger Detail (Display Mode)			
SAP_ASSET_MANAGER	Create Copy Delete 🖉 Change			
SAM _WORKORDER_TRIGGER_SCPMS	General Data Parameters			
	Outbound Trigger Handler Info			
	Outb. Trigger Id: SAM _WORKORDER_TRIGGER_SCPM	MS OTrig Handler: /SMF	FND/CL_CORE_OTRIG_CPMS_PUSH	Mobile Application: SAP_ASSET_MANAGER_
	Parameters Defined By Handler 😞		Record Para	meter Editor
	✓ Parameter List			
	APNS_OBJECT_TYPE		Boolean: Fals	e
	ENABLE_OBJECT_KEY_CONVERSION			
	NOTIF_BODY_LOC_ARGS NOTIF_BODY_LOC_KEY			
	NOTIF_TITLE_LOC_ARGS			
	NOTIF_TITLE_LOC_KEY SCPMS_WITH_SAP_USER_ID			

c. Return to the ConfigPanel home screen and click the *Push Scenario Definition* link. Navigate to the *Outbound Trigger* tab. Find and highlight the push on the list of *Push Scenarios by Mobile App* and ensure that the outbound trigger is active.

Results

Push services are activated for SAP Service and Asset Manager. Thoroughly test the push functionality before deploying to the client devices.

3.5.6 Activating Default Push Services for SAP Service and Asset Manager - Cloud Foundry

Prerequisites

(i) Note

The *SAP Service and Asset Manager Installation Guide* is a guide to setting up the basic framework necessary for push services using the default settings. For more details regarding configuration of push services, see the topic.

Before performing the procedure, ensure the following:

- SAP Service and Asset Manager application on the device is running on Mobile Development Kit 2.2.001
- You have installed SAP Service and Asset Manager 2310
- You have installed either SAP Mobile Add-On ECC or SAP Mobile Add-On for SAP S/4HANA. See the following installation guides on the following portal pages for version information:
 - SAP S/4HANA Mobile Add-On
 - SAP Mobile Add-On ECC

Context

To configure and activate push for the Android platform, see the Configuring Push for Android [page 234] procedure.

Procedure

- 1. Configure the SAP Business Technology Platform Mobile Services push API:
 - a. Enable the *Push Notification* feature in SAP BTP services:

= SAP			Mobile Service for Deve	lopment and Operations - Preview		
☆ Home	NativeHybrid / SAI	P_Asset_Manager_10_PProp				
Mobile Applications ~	SAP_	Asset_Manager_10_PProp(com.sap.sam10.pprop)				
Native/Hybrid						
SAP Content to Go	Delete Export	Publish to Discovery Service				
Features						
Destinations	Info APIs	User Registrations Usage Analytics Blocked Users		Add Feature	_	
Analytics >	Applicatio			Add Feature		
ig Settings >	Аррисано	Search			Q	State
		Name	Description	•		⊡ OK
		Access Control	Enable role checking and application version checking.			C OK
		Client Resources	Add client resources to an application.			С ок
		Document Repository JSON Storage	Enable access to the document repository without registering. Enable persistence of application-specific data.			⊠ ок
		Push Notification	Register devices to receive native push notifications.			🗹 ок
		Sample Back End	Use the sample service during development and testing.			
		Cloud Build	Build Custom Fiori Clients for your SAP Fiori business apps.		_	
					OK Cancel	

b. Navigate to the *Push Notification* in the mobile app and create a new HTTP connection to your external server named *Assigned Features*:

Ø	Assigned Features		+
	Name	State	
	°⇔ App Update	[⊻ ок	>
	ଶ୍ ଥ ି। Client Policies	[⊻ ок	>
	え Connectivity	[⊻ ок	>
	∞ _a Offline	⊡ ок	>
	☑ Push Notification	⊡ ок	>
	€ Security	⊡ ок	>

c. If you are using a custom deployment of SAP Service and Asset Manager, upload the corresponding APNs certificates here. If you are using the default application provided by the Apple App or the Google Play store, select *Predefined for* SAP Service and Asset Manager in the *Predefined Global Push Configuration* section.

Native/Hybrid / ijustneedscreenshots / Push Notification	
C Puch Notification	
Save Reset Remove from Application	
Configuration Info	
Push Text Messages (SMS)	Predefined Global Push Configuration
Enable Text Messages (SMS):	Predefined for:
Apple	Android SAP Fort Client SAP Context
APNS Endpoint: None	Server Key: SAP Mobile Services Client
	*Sender ID: SAP Asset Manager
BlackBerry	WNS
Push Type: None V	Package SiD:
	Client Secret:
MPNS	
Enable MPNS HTTP Push:	

The SAP Business Technology Platform Mobile Services is configured for push.

- 2. Configure the back-end system to utilize the SAP BTP services push APIs:
 - a. Using the SAP GUI, run transaction *SM59*. Create a new HTTP connection with the name *SAM2310_SCPMS_PUSH_NOTIFICATION*.

O Note

In a Cloud Foundry environment, you must use email instead of an I-number to utilize push notifications in the Administration portal.

🖝 RFC Edit Goto Extras Utilities Syst	tem <u>H</u> elp
🔮 🔜 👻 🐇 🕲 🄇	8 🕆 🕹 🖬 🕼 🗈 🗈 🗐 🗐 🖓 😵
Configuration of RFC Connections	
🕞 Generate RFC Callback Positive Lists 🛛	Activate Non-Empty Whitelists 🔹 🕈 Positive List for Dynamic Connections
● OO RFC callback check not secure	
🗿 🚹 🗋 💉 6à 🚋 I	
RFC Connections	Ty PL Comment
> ABAP Connections	3
Y 🧧 HTTP Connections to External Server	G
• 🖹 ADS	G AdobeDocumentServices
CSI_AWS_EC2	G
• 📄 CSI_AWS_S3	G
RCC_GRID_ENGINE	G
SAM _SCPMS_PUSH_NOTIFICATION	G SAM SCPMs Push Notification Destination
In the Technical Settings and tab of	f the new connection, set the <i>Target Host</i> to match the push API
of the SAP BTP services, using 443	B (the port number for HTTPS connections). Ensure the Path
•	/mobileservices/push/v1/backend/applications/ <app< td=""></app<>
TICHA CQUAIS / PUSIT ORL GOID?	/ mobileservices/ push/ vi/ backend/ applications/ <app< td=""></app<>
ID>/notifications/users	

9	« 📙 🔇 🎸	8 🖶 H 🛱	教教教教	ᆽ ?
RFC Destinatio	on SAMCH	PMS_PUSH_NO	TIF_CF	
Connection Test 🛛 🥱				
RFC Destination Connection Type Description	SAM: _CPMS_PUSH G HTTP Connection to E		escription	
Description 1 S Description 2 Description 3	AM CPms CF Push N	otification Destination		
Administration	Technical Settings	Logon & Security	Special Options]
Target System Setting	IS			
Target Host Path Prefix			Service No. 443	}
HTTP Proxy Options				
Global Configura	tion			
Proxy Host				
Proxy Service				
Proxy User Proxy PW Status	is initial			

b.

(i) Note

If necessary, configure the proxy you are using to allow your back end to connect to the outside internet.

- c. Click the Logon & Security tab. Under the Logon Procedure, select Basic Authentication. Enter the Mobile Push Notification Alias as the user name and the Mobile Push Notification API Key as the password.
- d. In *Mobile Services*, ensure your service user has the *API Key* assigned to them to ensure that the user is allowed to utilize the SAP BTP services API. This API key is the same value used as the password in the *RFC Destination*.

Native/Hybrid / Mobile Push Notification		Save Reset	Remove from Application	Disable Detailed Event Log	
Configuration Push Registrations Service Keys	Info				
Service Keys					+
Alias API Key	Roles	URL		Actions	
unmenter Distant	push_single,push_multiple,push_all,pushregistrations_read			Ū	

Basic authentication for this service user allows for free communication flow.

- e. In the Security Options section of the Logon & Security tab, ensure that the <SSL Secure Protocol> is set to Active.
- f. Remaining in the *Security Options* section, ensure that the *SSL Certificate List* used contains the SAP Business Technology Platform certificate chain and is active.

<u>Connection</u> <u>E</u> dit	<u>G</u> oto Extr <u>a</u> s Utilitie <u>s</u>	System <u>H</u> elp
•		🖸 🗇 🗛 🚯 🗅 💭 💭 🔽 🔽
RFC Destination (CLOUD_PLATFORM_C	
Connection Test	69.	
RFC Destination	CLOUD_PLATFORM_CONN	ECTION
Connection Type G		
Description		•
Description 1	oud Platform Connection	
Description 2		
Description 3		
Administration	Technical Settings Logon	& Security Special Options
		<u></u>
Logon Procedure		
Logon with User		
O Do Not Use a Use	r	
Basic Authenticati	ion	
User		
PW Status		
Password ***	*****	*************
Logon with Ticket		
Do Not Send Logo	on Ticket	
	et Without Ref. to a Target S	vstem
	icket for Dedicated Target Sys	
System ID	Client	stem
System ID	Cilette	
Security Options		
Status of Secure Pro	itocol	
SSL	O Inactive 💿	Active
SSL Certificate	DFAULT SSL Client	
Authorization for Dest	ination	
		-

Check the certificate list of the SSL client by using the *STRUST* transaction. Check the matching trust list and ensure that the SAP BTP services certificate chains are in it.

<u>PSE E</u> dit <u>G</u> oto <u>C</u> ertificat	e En <u>v</u> ironment S <u>v</u> stem <u>H</u> elp
 <td>🖶 🔇 😂 🖶 🗄 🕼 🟥 🗅 🖨 💭 🌄 🌄 😵 🏵</td>	🖶 🔇 😂 🖶 🗄 🕼 🟥 🗅 🖨 💭 🌄 🌄 😵 🏵
Trust Manager: Display	
🦻 🕅	
> <mark> </mark>	SSL client SSL Client (Standar
	Own Certificate
	Subject
🖌 🚾 SSL client SSL Client (Standar	Issuer Certificates
•	
	·
	v
	☑ Trust issuer certificates
	Certifičate List
	民 Subject
	· ·
	S Verification PSE
	Certificate

View the SAP BTP services certificate chain in any web browser by opening up the SAP BTP services cockpit and checking the security settings.

🛶 📴 1		
	-3.0	
Certificate ^{(kanduart}	Issued by: DigiCert SHA2 Secure Server CA Expires: Standard Time Inis certificate is valid	Central
Details		

g. Save the connection and perform a connection test. If the configuration is completed properly, a 405 code is returned.

 Image: A start of the start of	« 📕 🔇 🤇	🔊 😒 🖶 H 🗛	11111	↓ ②
Connection 7	est HTTP Desti	nation SAM	CPMS_PU	SH_NOTIF_CF
	M:CPMS_PUSH_NOTIF	-		
Test Result	Response Header Fields	Response Body	Response Text	
Detail	Value			
Status HTTP Respons	e 405			
Status Text	Method Not Allowed			
Duration Test Call	585 ms			

- h. In the SAP GUI, open the Administration Panel using transaction /n/syclo/admin.
- i. Navigate to Administration Server Management . Create a new middleware server, specifying the RFC destination you just created.

	Save 🗙	oui
Basic Info Additional F	Properties	
* Mobile Application:	SAP Asset Manager × Server GUID:	
* Server Name:	CLOUD_FOUNDRY *Port:	
* Middleware Svr SerNo:	CF	
Server URL (FQDN):		
Target Host:		
Tenant Id:		
System Component:	* ~	
RFC Destination:	SAM _CPMS_PUSH_NOTIF_CF (G) : SAM CPms CF Push Notification Destination	\sim
UI Host Name:		
Local Outbound Trigger Port:	00000	
Outbond Trigger URL Type:	Use FQDN when available \sim	
Lock Flag:		
Disabled for Outbound Trigger:		

- j. On the additional properties tab, create a new property with the following attributes:
 - Property Group: PUSH
 - Property Name: X-API-Key
 - Property Value: Mobile push API key from SAP BTP services

		📕 Save 🗶 Ca
Basic Info Additional	Properties	
roperty List		
	emove Property	
Property Group	Property Name	Property Value
PUSH	X-API-Key	the second se

The back-end system can now send push notifications.

- 3. Configure the back end to enable push from the SAP Service and Asset Manager application:
 - a. Using the ConfigPanel, navigate to the *Outbound Trigger Configuration* panel, *General Data* tab. Check the outbound triggers to ensure that the previously established *HTTP RFC Destination* is set as the RFC destination to the APPID that provides the push notifications to the mobile devices.

ConfigPanel Home		Mobile Application Filter: SAP Asset Manager	~	
Outbound Triggers By Mobile App 😞 🛛	Outbound Trigger Detail (Displa	ay Mode)		
SAP_ASSET_MANAGER_	Create Copy	ete 🥒 Change		
SAM WORKORDER_TRIGGER_SCPMS	General Data Pa	arameters		
	Basic Data			
	Outb. Trigger Id: SAM	WORKORDER_TRIGGER_SCPMS		
	Outb. Trigger Desc.: Work On	der Push Notification - SCPms		
	Mobile Application: SAP Ass	et Manager		
	Trigger Handler Info			
	Outb. Trigger Handler: /SMFND/CL_CORE_OTRIG_CPMS_PUSH : HTTP outbound trigger - SCPms oData Push Notifice			
Outb. Trigger		HTTP based trigger		
	HTTP RFC Destination:	Design and the appropriate the second s		
	Cloud Platform Mobile App. Id:	com.sap.sam .oauth		
	Target Host Name:			
	Target Host IP:			
	Target Host Port No.:	00000		
	URL Identifier Type:	IP Address		
	Web Protocol:	HTTP		
	Min. Conn. Time(Sec):	0		
	Check Response: Parameter:	V.		
	Parameter.			
	Retry Setting			
	Allow Retry:			
	Maximum No. of Retry:	10 Retry Wait Period (Seconds): 0		

b. Click the *Parameters* tab. If your user store on the back end and user store on the SAP Business Technology Platform are identical, set the *SCPMS_WITH_SAP_USER_ID* parameter value to *True*. If the user stores are not identical, set the parameter to *False*.

ConfigPanel Home		Mobile Application Filter	SAP Asset Manager	~	
Outbound Triggers By Mobile App 🛛 😞	Outbound Trigger Detail (Display Mode)				
SAP_ASSET_MANAGER SAM _CLEAR_PUSH_Q_WORKORDER SAM _WORKORDER_TRIGGER_SCPMS	Create Copy Delete / Change General Data Parameters				
	Outbound Trigger Handler Info Outb. Trigger Id: SAMWORKORDER_TRIGGE	R_SCPMS OTrig Handler:	/SMFND/CL_CORE_OTRIG_CPMS_PUSH	Mobile Application:	SAP_ASSET_MANAGER_
	Parameters Defined By Handler Parameter List APNS_OBJECT_TYPE ENABLE_OBJECT_KEY_CONVERSION NOTIF_BODY_LOC_ARGS NOTIF_BODY_LOC_KEY NOTIF_ITILE_LOC_ARGS NOTIF_ITILE_LOC_KEY SCPMS_WITL_SAP_USER_ID			aneter Editor	

c. Return to the ConfigPanel home screen and click the *Push Scenario Definition* link. Navigate to the *Outbound Trigger* tab. Find and highlight the push on the list of *Push Scenarios by Mobile App* and ensure that the outbound trigger is active.

Results

Push services are activated for SAP Service and Asset Manager. Thoroughly test the push functionality before deploying to the client devices.

3.5.7 Configuring Push for Android

Firebase Cloud Messaging (FCM) is a cross-platform cloud solution for messages and notifications for Android, iOS, and web applications.

Context

To enable push notification for the SAP Service and Asset Manager application using the Android platform, use the following procedure:

Procedure

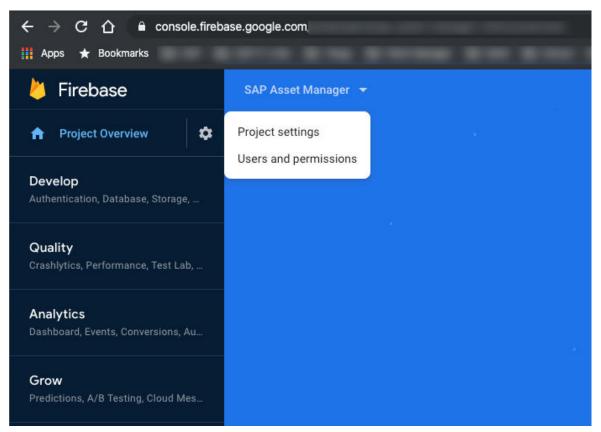
1. Create a free Firebase account. See the main Firebase ₱ page to set up a new account, or connect an existing account.

O Note

Documentation on Firebase is found on the Firebase Documentation *p* page.

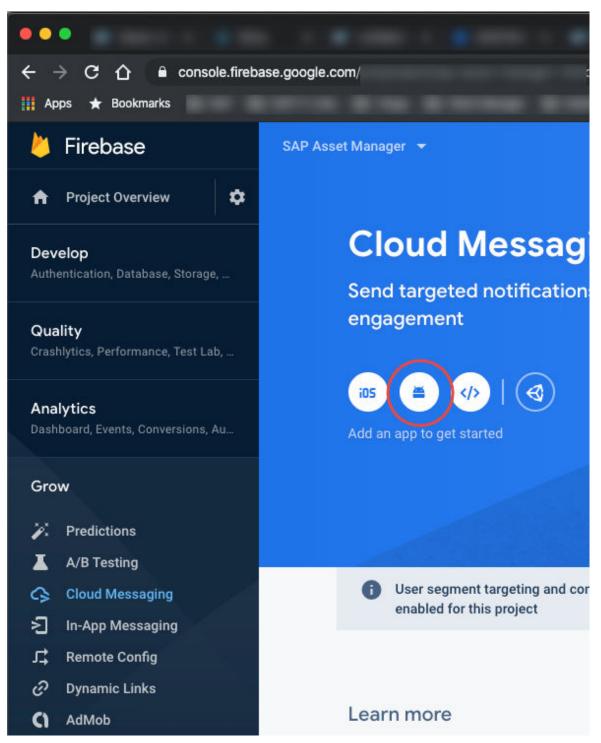
2. Add a new project, or use an already-existing project.

3. Click the gear icon and select the *Project Settings* menu option. Click the *Cloud Messaging* tab.



- 4. Copy and paste the information in the Server Key field to use in a later step.
- 5. Navigate to Grow Cloud Messaging using the sidebar.
- 6. Click the Android icon to add a new Android app.

The Add Firebase to your Android app window appears.



7. Add your package name to the *Android package name* field in *Step 1*. Ensure that the package name matches the *BundleID* found in the SAM.mdkproject/MDKProject.json file. When done, click *Register app*.

Your app is registered and you're moved to Step 2 - Download config file.

com.sap.mo	bile.apps.assetmanager.release
App nickname (optional) 💿
SAP Asset N	/anager
	ertificate SHA-1 (optional) ⑦
00:00:00:00	:00:00:00:00:00:00:00:00:00:00:00:00:00

8. Click the Download google-services.json button located in Step 2 - Download config file.

The google-services.json file is downloaded to your computer.

- 9. Navigate to SAM.mdkproject/App_Resources/Android. Paste the google-services.json file you downloaded in the previous step to this location.
- 10. Build the SAP Service and Asset Manager client. For detailed instructions on building the client, see SAP Asset Manager Installation Guide, Building / Branding the SAP Asset Manager Application chapter.
- 11. Copy and paste the server key you saved in *Step 3* inside your SAP BTP services push notification configuration in the *Android* section.

For instructions on how to enable Android push notifications in SAP BTP services, see the Android Push Notifications procedure.

For detailed information on configuring push for the SAP Service and Asset Manager application, see the procedure Activating Default Push Services for SAP Asset Manager, specifically the screenshot in *Step 1d*.

Next Steps

Continue to the procedure Setting up the Outbound Trigger for your Push Configuration [page 214].

Related Information

https://help.sap.com/viewer/DRAFT/f15c174c3c3647088d38fb220e42c006/latest/en-US/ 5629175b49304549b724bc838c9a72ec.html

4 Setting up an OData Mobile Data Object

For OData troubleshooting information, see OData API in the SAP Cloud Integration documentation.

4.1 Supported OData Features for SAP Mobile Add-On

OData Feature	Status

The following table lists the OData features that SAP Mobile Add-On supports.

Create	Maps to HTTP POST method
Read	Maps to HTTP GET method
Update	Maps to HTTP PUT method
Delete	Maps to HTTP DELETE method
Query	Maps to HTTP GET method
\$select	Specifies a subset of properties to return
\$top	Determines the maximum number of records to return
\$skip	Sets the number of records to skip before it retrieves records in a collection
\$filter	Specifies an expression or function that must evaluate to <i>true</i> for a record to return to the collection
\$count	Returns the number of records in a collection
\$orderby	Determines which values are used to order a collection of records
\$expand	Specifies that related records must be retrieved in line with the record or collection being retrieved. For example, use <i>\$expand</i> to retrieve a customer and all orders placed by that customer in a single query.
\$inlinecount	Supported
\$skiptoken	Supported

OData Feature	Status
\$format	Supported
Navigation	Supported
Delta token	Supported
Tombstone	Supported
Complex types	Supported
\$batch	Supported
Deep insert	Supported via single post operation and through \$batch re- quest using content ID referencing
Custom query options	Not supported
\$link	Not supported
\$value (media links or attachments)	Supported
ETags / concurrency control	Supported
\$filter Details	
String functions	Partially supported
 Supported: bool substringof(string p0, string p1) Not Supported: string trim(string p0) string concat(string p0, string p1) int length(string p0) int indexof(string p0, string p1) string replace(string p0, string find, string replace) bool endswith(string p0, string p1) bool startswith(string p0, string p1) string toupper(string p0) string substring(string p0, int pos) string substring(string p0, int pos, int length) string tolower(string p0) 	
Date functions	Not supported
Math functions	Not supported

Arithmetic operators

Not supported

0	DData Feature	Status
Т	ype functions	Not supported
\$	filter supported on complex type properties within an entity	
	③ Note	
	For related constraints, see SAP Note 1830712 /	

4.2 Setting the OData Mobile Data Object Service Assignment

You can assign SAP system aliases to a service. With the assignment, an OData request from an SAP Gateway consumer can be routed to the corresponding back end service.

Context

Assign OData services to the SAP Asset Manager application using the Service Assignments tab.

	SAP_ASSET_MANAGER_ SAP Asset Manager				Mobile Ap	p. Type: oData Application	
	1					velease.	
Service Assignment	s Composition Settings						
ta Service Assign	ment List						
 oData Version 	* oData Service	Active	Defec Deteb Dece	May Device of Devents	Oraba Usadabala	Service	Service Version
oData Version 2.0			Defer Batch Resp	Max Payload Records 100.000	Cache Handshake		0001
	/MERP/SAP_ONLINE_LOOKUP_EXT_	 Image: A start of the start of	 Image: A start of the start of			/MERP/SAP_ONLINE_LOOKUP_EXT_	
oData Version 2.0	/MERP/SAP_ASSET_CENTRAL_EXT_	 Image: A set of the set of the	✓	100.000		/MERP/SAP_ASSET_CENTRAL_EXT_	0001
oData Version 2.0	/MERP/SAP_ASSET_MANAGER_	\checkmark	\checkmark	100.000		/MERP/SAP_ASSET_MANAGER	0001
oData Version 2.0	/MERP/SAP_CREW_MANAGER_	\checkmark	\checkmark	100.000		/MERP/SAP_CREW_MANAGER_	0001
oData Version 2.0	/MERP/SAP_FIELD_OPER_WORKER_	\checkmark	\checkmark	100.000		/MERP/SAP_FIELD_OPER_WORKER_	0001
oData Version 2.0	/MISU/SAP_ASSET_MANAGER_	\checkmark	\checkmark	100.000		/MISU/SAP_ASSET_MANAGER_	0001

Build a hierarchy between assigned services using *Composition Settings*. To utilize OData entities from a different service such as the Crew Management and Field Operations Worker component service, add the relevant OData services (*/MERP/SAP_CREW_MANAGER_<XX>* and */MERP/*

SAP_FIELD_OPER_WORKER_<XX>) under the SAP Service and Asset Manager service as shown in the following example:

bbile Application oData Service Assignment (Display I	Mode)	
Change		
Mobile Application: SAP_ASSET_MANAGER_	Mobile App. Type:	oData Application
Mobile App. Desc.: SAP Asset Manager	Release:	
Service Assignments Composition Settings		
Service Component Composition List		
Service Components	Enabled	
✓ /MERP/SAP_ONLINE_LOOKUP_EXT_		
/MISU/SAP_ASSET_MANAGER_	✓	
/MERP/SAP_ASSET_MANAGER_	✓	
/MERP/SAP_ASSET_CENTRAL_EXT_	v	
/MERP/SAP_CREW_MANAGER_	v	
/MERP/SAP_FIELD_OPER_WORKER_	\checkmark	
Service Component Detail		
* Parent oData Service:	Component oData S	Service:
Enabled:		

Procedure

- 1. Ensure that your mobile application is selected in the *Mobile Application Filter* field at the top of the page.
- 2. Expand the Mobile Application List in the left pane and select your mobile object.

Your chosen mobile application OData service assignment details are displayed in the main window on the *Service Assignments* tab.

- 3. Click the *Change* button to change the existing mobile service assignment details or to add a new mobile service assignment.
- 4. To add a new mobile service assignment, click the Assign OData Service button.
 - a. Select an OData Version, if there is more than one to choose from, from the dropdown menu.
 - a. Select an OData Service, or system alias, from the dropdown menu.

The corresponding back-end server is populated in the Service field.

- b. To *Defer Batch Response*, mark the checkbox. That is, you are setting the OData service to process all of the CHANGESET operations at once (deferred processing).
- c. To activate your new service assignment, check the *Active* checkbox.

- 5. On the *Composition Settings* tab, build a hierarchy between your OData services to include all metadata from different child services. You can add and remove component assignments depending on your service needs.
- 6. To add a component assignment, choose Add Component Assignment.
 - a. Select a Parent OData Service from the dropdown list.
 - b. Select *Component OData Service* from the available list to make it a child service for the parent OData service.
 - c. To activate the new component assignment, check the *Enabled* checkbox.
- 7. To remove the component assignment, select the service component you want to remove and choose *Remove Component Assignment*.

The hierarchy relationship with its parent service component is removed.

Next Steps

Perform the following procedures:

- Setting the OData Mobile Data Object Configuration [page 243]
- Setting the OData Model Configuration [page 245]

4.3 Setting the OData Mobile Data Object Configuration

Prerequisites

If you are setting up a new OData mobile data object, or changing an OMDO, read and perform the following procedures before performing this procedure:

• Setting the OData Mobile Data Object Service Assignment [page 241]

Context

Data Mobile Data Object Detail (Display Mode) Create Copy Change OMDO Id: SAM WORK_ORDER_GENERIC Mobile Application: SAP Asset Manager OMDO Handler: //MERP/CL_PM_WORKORDER_OD:oMDO	Description:	Work Orde	r		
General Setting Technical Model Info Data Filter Field Selection Change Detection	Dependent	Object	Transaction Settings	Outbound Trigger Assignment	
Read Request Process Flow Process Flow: Standard Flow using Key List Exempt Read Entity Request: Image: Colspan="2">Image: Colspan="2">Client State Settings Client State Setting: Image: Colspan="2">Image: Colspan="2">Colspan="2" Enable Celent State Tracking: Image: Colspan="2">Image: Colspan="2" Enable Periodic Refresh: Refresh Frequency (Hour): Image: Colspan="2" Delta Sync Setting Image: Colspan="2" Image: Colspan="2"					
Support Delta Sync: V Data Distribution Mode: Always perform distrib. key calculation					
Key Calculation using Client State History: 🗹 Delta Object Key List Setup Mode: Same as Data Distribution Keylist					
Server Side Paging Setting					
Enable Paging: V Paging Package Size: 5.000					
Session Control Settings					
Sync Session Max Idle Time (Second): 120 Sync Priority: 10					
Localization Settings Enable Localization Setting: Language:					

Procedure

1. Navigate to and click the Mobile Application Integration Framework Configuration Home OData Mobile Data Object Configuration link.

The OData Mobile Data Object Configuration Detail page displays.

- 2. Select your application in the *Mobile Application Filter* field. Selecting an application filters the OData Mobile Data Object by Mobile App choices in the left panel to only those available in your chosen application.
- 3. If you are copying an OMDO, which is recommended, choose your OMDO from the *OData Mobile Data Object by Mobile App* list on the left and copy it to your customer namespace. See the Copying an Object to the Customer Namespace [page 147] procedure for more details. Do not modify the original OMDO.
- 4. Enter an OMDO ID in the field with customer namespace.
- 5. Select a *Mobile Application* from the dropdown list.
- 6. Select an *OMDO Handler* from the dropdown menu. The OMDO handler is the name of the handler as defined in the system.

The OMDO handler will provide the data source for the entity record.

- 7. Enter a short *Description* of your new OData mobile data object.
- 8. Choose one of two settings for the Process Flow in the Read Request Process Flow section:
 - Standard Flow Using Key List

• Basic Flow without Key List

- 9. You can keep the *Client State Settings* from the original OMDO, or change it depending on your business needs.
- 10. You can keep the *Delta Sync Settings* from the original OMDO, or change it depending on your business needs.
- 11. Check the *Enable Paging* checkbox to set the package size for the SAP BTP services. Type in a number for the default package size in the *Paging Package Size* field.

Next Steps

Continue to Setting the OData Model Configuration [page 245].

4.4 Setting the OData Model Configuration

An OData model gives detailed information about each object in an OData feed. You can define a new data model in your application to suit your requirements based on the data you want expose at runtime.

Prerequisites

Complete the following procedures:

- Setting the OData Mobile Data Object Service Assignment [page 241]
- Setting the OData Mobile Data Object Configuration [page 243]

Context

Entity Sets are used to group instances of an entity type together with instances of any type that are derived from this particular entity type. You can access the OData entity details from the ConfigPanel home page by choosing *OData Model Configuration*.

You can define properties for entity types on the **Property List** tab. Properties define the characteristics of data that an entity type instance contains at runtime.

An association is a named relationship between different entities. An association defines a peer-to-peer relationship between participating entity types, and it can also support different multiplicities at both ends. You can define associations between current and dependent entities on the **Association & Set List** tab. An association set groups association instances, and specifies the relationship between two entity sets based on the respective entity types of the underlying association.

Navigation properties describe the association relationship between two entities. The navigation property is tied to an association, and it allows the navigation from one end of the entity type, which declares the

navigation property, to the other related end. The entity types include one or more navigation properties and can be defined on the *Navigation Property List* tab.

Finally, you can set the bind structure conversion exits and the Media flag for entity type on the *Additional Setting* tab.

Mobile Applicati	on oData Model Detail (Display opy 1 🗊 Delete 🥜 Change	Mode)				
* Entity Type Name:	Document		Active Flag:	\checkmark	Entity Type Id:	3440B5B074
* Mobile Application:	SAP_ASSET_MANAGER_20 : SAP Asset M	anager 2.0				
* oData Service Id:	3440B5B074361ED7BDC646E13147E		Tech. Service Name:	/MERP/SAP_ASSET_MANAGER_20	Version:	0001
* oMDO Id:	SAM20_DOCUMENT : Abstract Document N	lanagement	* oMDO Entity Type:	ABSDOCUMENT : /MERP/CORE_ABS_DOO	C_ENTIT	
EntitySet	Property List Association & Set List	Navigation Property List Add	itional Setting			
* Entityset Name:	Documents					
Creatable:	V Updatable: Deletable:]				
Pageable:	Filter Required:					

③ Note

Optional steps are included to explain the required fields when creating a new OData model. These fields are grayed out when you are working with a copied OData model and you can ignore them in the procedure.

Use the following steps as a guide to change an existing OData model:

Procedure

1. Navigate to and click the Mobile Application Integration Framework Configuration OData Model Configuration link.

The Mobile Application OData Model Detail page displays.

- 2. Select your application in the *Mobile Application Filter* field. Selecting an application filters the OData Model Entity Type by Mobile App choices in the left panel to only those available in your chosen application.
- 3. Once you have selected the mobile application, select OData Service ID from the drop-down list.

Note that you cannot share models between OData services. Each service has its own model.

- 4. If you are creating a new OData model, click on *Create* button on the top and type an entity type name in the field. The entity type name represents the structure or a single record.
- 5. Select an *OMDO ID* from the drop-down list. The OMDO ID is the object that is providing the data for the record.
- 6. Select an *OMDO Entity Type* from the drop-down list. The OMDO entity type is the source that provides information to the OData model. When a service request for the entity type occurs, the OData model invokes the selected OMDO ID and the related handler method.
- 7. Type an *EntitySet Name* into the field. While an entity type describes a data structure, an entity set contains the instances of the given structure. Therefore, a best practice for an entityset name is to create a plural of an entity type name. For example, if an entity type name is *Test*, the entityset name will be *Tests*.
- 8. Check any of the following checkboxes to enable additional OData features. Note that some may require additional configuration on other tabs or links.
 - Createable: Similar to a POST request in REST

- *Pageable*: Enables data staging. See Setting the OData Mobile Data Object Configuration [page 243], *General Setting* tab, *Server Side Paging Setting* section, for more information.
- Updateable: Similar to a PUT or MERGE request in REST
- *Filter Required*: When checked, the entityset cannot be accessed directly. That is, the entityset is only valid within its containing entity and is not visible in the service document. You cannot query the entityset without using a *filter* expression. If you try to access the entity set without using a *filter* expression, a message displays that explains which filter expressions are required, at a minimum.
- Deletable: Similar to a DELETE request in REST
- 9. Click the *Property List* tab.

Property Name	*oMDO Field Name	Edm Typ	e	Key	Creatable	Updatable	Sortable	Nullable	Filterable	Content Type	Max Length	Precision	Scale	ETag	Conversion Exit
DocumentID	DOC_ID - CHAR (42)	Edm.St.	. ~	~					~		42	0	0		
ClassName	CLASSNAME - CHAR (30)	Edm.St.	. ~						✓		30	0	0		
ClassType	CLASSTYPE - CHAR (2)	Edm.St.	. ~						~		2	0	0		
CompCounter	COMP_COUNT - NUMC(8) V	Edm.St.	. ~								8	0	0		
CompSize	COMP_SIZE - NUMC (12)	Edm.St.	. ~								12	0	0		
ComponentID	COMP_ID - CHAR (255) \sim	Edm.St.	. ~								255	0	0		
Description	DESCRIPTION - CHAR (2 V	Edm.St.	. ~								255	0	0		
DocCounter	DOC_COUNT - NUMC (8)	Edm.St.	. ~								8	0	0		
ileName	FILE_NAME - CHAR (255) \sim	Edm.St.	~								255	0	0		
ileSize	FILE_SIZE - NUMC (12) \sim	Edm.St.	. ~								12	0	0		
ileType	FILE_TYPE - CHAR (1)	Edm.St.	. ~								1	0	0		
/limeType	MIMETYPE - CHAR (128) \sim	Edm.St.	. ~							~	128	0	0		
DbjectKey	OBJECT_KEY - CHAR (70) ~	Edm.St	. ~						✓		70	0	0		

10. To add a new property to the entity type, click the Add button.

- a. Type the property name into the <Property Name> field.
- b. Select an oMDO Field Name from the dropdown list.
- c. Select the appropriate *EDM Type* (Entity Data Model) from the dropdown list.
- d. Check the Key column for Key fields.
- e. Define the attributes of the new property depending on the scope of the entity type.

If you use the *Datetime* Edm Type and its related properties as an optional field, set the attribute *Nullable* to true.

11. Click the Association & Set List tab.

Add Association	Delete Association								
Association Name		*Dependent Entity Type		Principal Cardinality		Dependent Cardinality		Dependent oMDO Id	Dependent Tech Entity Typ
BDSDoc_FuncLocBDS	Doc	MyFuncLocBDSDocu	\sim	01	\sim	0n	\sim	SAM10_FUNCLOC	FUNCLOC_BDSDOC
BDSDoc_WOBDSDoc		MyWorkOrderBDSDo	~	01	~	0n	\sim	SAM10_WORK_ORD	WOBDSDOC
BDSDoc_NotifBDSDoc		MyNotifBDSDocument	\sim	01	\sim	0n	\sim	SAM10_NOTIFICATI	NOTIFBDSDOC
BDSDoc_EquipBDSDo	c	MyEquipBDSDocument	~	01	~	0n	~	SAM10_EQUIPMENT	EQUIP_BDSDOC
	Referential Constraints								
ssociation Refere									
ssociation Refere	ntial Constraints	Dependent Entity Type	De	spendent Property					
ssociation Refere	ntial Constraints	Dependent Entity Type MyFuncLocBDSDocument							

Define associations between entities to express relationships between entities.

Associations themselves are freestanding. Specify on top of the associations, which of the entities participating in the relationship can navigate over the association to the other entity using the *Referential Constraints* tab.

- 12. Click the *Add Association* button to add a new association. Associations define a peer-to-peer relationship between participating entity types, and can support different multiplicities at both ends.
 - a. Type a name for your new association in the Association Name field.

Your Association can be either internal or external when adding a new association; by default the current entity will be the principle entity. If you want to add an external association where the current entity is treated as dependent entity, select the *External Association* checkbox.

- b. Select the dependent entity from the *Dependent Entity Type* drop-down menu for internal association, whereas select the *Principle Entity Type Id* from the drop-down for external association.
- c. Choose the *Principle Cardinality* and the *Dependent Cardinality*. Both use the following cardinality rules. Note that many-to-many relations are not supported in SAP Asset Manager
 - 0..1: Only one instance occurs; zero is also allowed
 - 1: One-to-one relations. Exactly one instance occurs
 - 0..n: Zero-to-many relations. Zero or more instances occur
 - 1..n: One-to-many relations. One or more instances occur
- d. Select the *Principle/Dependent OnDelete Cascade* checkbox, if you want to delete an associated collection when a principle or related parent entity got deleted from the mobile device. This feature only works with local objects.
- e. Type the name of your association set in the Association Set Name field under Association Set.
- 13. Click the *Referential Constraints* tab to add or change a referential constraint.

Add Constraint	ferential Constraint				
Principle Entity	Type Principle Property	De	ependent Entity Type	Dependent Propert	у
BDSDocument	DocumentID	~ M3	/FuncLocBDSDocumen	t DocumentID	\sim

Referential constraints ensure that the principle entity that is referenced always exists. You can use a referential constraint to specify the foreign key relationship for a 1:1 relationship or a 1:n relationship.

You have to match the key properties of the principle entity type with the properties from the dependent entity type that correlates to the key property of the principle type. Populate all key properties from the principle entity type.

- a. Click the Add Constraint button to add a new referential constraint.
- b. Select the *Principle Property* and the *Dependent Property* from the drop-down menus. As mentioned earlier, the entities must be identical and all key properties must be populated from the principle entity.
- 14. Click the Navigation Property List tab to create a navigation property for entity types.

Add Navigation Property	elete Navigation Property				
Navigation Property Name	*Technical Name	*Association		Principle Entity Type Name	Target Entity Type Name
EquipBDSDocuments	EQUIPBDSDOCUMENTS	BDSDoc_EquipBDSDoc	\sim	BDSDocument	MyEquipBDSDocument
FuncLocBDSDocuments	FUNCLOCBDSDOCUMENTS	BDSDoc_FuncLocBDSDoc	\sim	BDSDocument	MyFuncLocBDSDocument
NotifBDSDocuments	NOTIFBDSDOCUMENTS	BDSDoc_NotifBDSDoc	\sim	BDSDocument	MyNotifBDSDocument
WOBDSDocuments	WOBDSDOCUMENTS	BDSDoc_WOBDSDoc	\sim	BDSDocument	MyWorkOrderBDSDocument

The navigation property is tied to an association, and it allows the navigation from one end of the entity type that declares the navigation property to the other related end.

(i) Note

If you add a new navigation entity, first add a new association for it through the *Association & Set List*. Set the association cardinality for both principle and dependent entities.

15. Click the Add Navigation Property to add a new navigation property.

You can create a navigation property for both principle and dependent entity type using the same association so that link will be created in both directions.

- a. Type a name into the Navigation Property Name field.
- b. Type a technical name into the *Technical Name* field.
- c. Choose an Association (coming from the Association & Set List tab) from the drop-down menu.

The *Dependent OMDO ID* and *Dependent Tech Entity Type* cells are populated based on which association entity you choose.

- d. Repeat these substeps to create the navigation property on the remaining principle or dependent object.
- 16. Click the Additional Setting tab.

EntitySet Property List	Association & Set List Navigation Property List Additional Setting
Media Flag: Enable Structure Conversion Exit:	

- a. Select the *Media Flag* checkbox for media-related entity types to trigger the download of media content on the entity set collection.
- b. Select the *Enable Structure Conversion Exit* checkbox to allow the SAP Asset Manager application to access the OData channel. The OData channel delegates handling of conversion exits, currency, currency amounts, units of measurement, and unit amount conversions to the SAP Gateway framework.

Results

Once the model is fully defined, when a client makes an HTTP request, it is calling for the metadata for an OData service. The SAP Gateway returns an XML string to the client, which is also reflected in the ConfigPanel.

5 Configuring SAP Asset Manager for ASPM and PdMS

5.1 Configuring Checklist Parameters

Use parameters to enable the checklist feature and configure other checklist options available.

Context

③ Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

The ASPM Checklist feature is called IAM_CHECKLIST. By default, the feature is not enabled.

To configure the checklist options for SAP Service and Asset Manager, use the *CHECKLISTS* parameter group and the following parameters within the group:

- **MobileStatusCompleted:** Default is *Completed*. Do not change this setting unless you are integrating SAP Service and Asset Manager with another product besides ASPM.
- MobileStatusInProgress: Default is In Progress
- MobileStatusOpen: Default is Open
- **CompletedStatusText**: Default is *Published*. This parameter is used to distinguish completed checklists that have been downloaded from the back end versus checklists that have been completed locally on the client but are not yet synced. The parameter is necessary to make logic decisions on the client as checklists that have been completed and synced to the back end are no longer allowed to be edited. Do not change this setting unless you are integrating SAP Service and Asset Manager with another product besides ASPM.

The *CHECKLISTS* parameters correspond to the rules found in the OData mobile data object *SAM2310_ASPM_CHECKLIST*. You can add a data filter rule to your customer namespace, or change the existing parameter-rule association to a new parameter-rule association.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. You can scroll down to find the *CHECKLISTS* group parameters, listed in the *Context* section, or perform a search using the *Search* box. Highlight the parameter you want to configure and click the *Change* button.

eneral Mobil	le Status Setting	Conversion Exit Setting	System Compone	hts Parameters	Client Globals	User Attributes	Applicatio	on Persor	na Feati	ures	Sync Group	ps
Mobile Applicati	ion Info											
Mobile Application	SAP_SERVICE	ASSET_MANAGE	Rele	ase:								
Mobile App. Desc.	SAP Service and	d Asset Manager										
pplication Para	motors											
ppacadon raid	ameters											
	t						Search:	Checklist	ts			
Parameter List	t) J			Param. Value		L		ts Dep. R	Ac	No Ch	Com
Parameter List	t T V Parameter Group	9	 ▽ Param. Name CompletedSta 	usText	Param. Value Published		⊽ Sc	cope		Ac	No Ch	
Parameter List	Parameter Group CHECKLISTS)	y rurum. rume				⊽ Sc Ap	cope pplic	Dep. R			
Parameter List Import/Expor RecNo 0000000021	Parameter Group CHECKLISTS CHECKLISTS	9	CompletedSta	ompleted	Published		⊽ Sc Ar Ar	cope pplic pplic	Dep. R 0000000	~	~	
Parameter List The Import/Export RecNo 0000000021 0000000022	Parameter Group CHECKLISTS CHECKLISTS CHECKLISTS	5	CompletedSta MobileStatusC	ompleted Progress	Published Completed		Sc Ar Ar Ar	cope pplic pplic	Dep. R 0000000	 <td> <td></td></td>	 <td></td>	
Parameter List The Import/Export RecNo 0000000021 0000000022 0000000023	Parameter Group CHECKLISTS CHECKLISTS CHECKLISTS CHECKLISTS CHECKLISTS	9	CompletedSta MobileStatusC MobileStatusIr	ompleted Progress pen	Published Completed In Progress		Sc Ar Ar Ar	pplic pplic pplic pplic	Dep. R 0000000 0000000	 <td> <td></td></td>	 <td></td>	

- 3. Make your desired parameter association changes, or change the value of a parameter to *Z*, a custom activity catalog type.
- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter is not overridden at runtime through synchronization processing.
- 5. Save your changes.

Results

You have enabled the checklist parameters in the ConfigPanel.

Next Steps

Continue to the following procedures to finish configuring the checklist feature for ASPM:

- Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253]
- Checking the Readiness of the ASPM System [page 256]
- Readiness Check for Authenticated GIS Maps [page 261]

5.2 Setting Up an ASPM Connection to the ASPM System to Use Checklists

The RFC destination is already created and connected to the ASPM out of box. However, an oAuth connection from the ASPM Cloud Foundry system to SAP Service and Asset Manager is required.

Prerequisites

Use the Integration of Asset Central Foundation with SAP EAM guide to establish an oAuth connection. Pay attention to the Server Management Properties topic.

Context

Use the following procedure to create and configure an oAuth connection from the ASPM Cloud Foundry system to SAP Service and Asset Manager.

Procedure

1. Configure system component settings using the ConfigPanel:

- a. From the home page of the ConfigPanel, select *Mobile Application Configuration*. Choose your application from the *Defined Mobile Applications* list. Then select the *System Components* tab.
- b. Click the Change pencil icon.

The System Components page becomes editable.

- c. Click the Add button in the System Component List to add a new component.
- d. Create your new component using the following fields:
 - System Component: SAM_ASPM_PUBLIC_CLOUD
 - Active Flag: checked
 - Primary Flag: checked

General I	Mobile Status	Setting	Conversion E	Exit Setting	System Corr	ponents	Parameter	rs Client (Globals Use	er Attributes
Mobile Applicatio Mobile Application Mobile App. Desc. Multi Backend Enabled Mutil Backend S	SAP_ASSET				Release:					
System Compon	ent List									
System Compon		System Role		RFC Destination	Active Flag	Component	t Mobile App.			
SAM_ASPM_PU		Host		RFC Destination	Active Flag	Component	t wobile App.			
	20000	11001								
System Compo	nent Detail									
* System Compone	nt: SAM_ASP	M_PUBLIC_C	LOUD							
RFC Destination	on:							~]	
Ho	st:								System Number:	
Clie	nt:									
System Ro		\sim			Activ	e Flag: 🔽			Primary Flag:	
Component Mobile Ap				6	0	0				
Created E Last Changed E					Creation Time Changed Time					
Last Gridfiged E	Jy.				changeu rime	oranip.				

You've configured which system component you're connecting to the ASPM system.

- 2. Press the Save button. If necessary, move these changes to other systems in your landscape.
- 3. Configure server component settings using the Admin Portal
 - a. Access the Admin Panel from the SAP GUI using transaction code /n/SYCLO/ADMIN.
 - b. From the main page of the Admin Portal, navigate to Administration Server Management . In the Search Middleware Servers section, choose your application from the list in the <Mobile Application> field. Click Search.
 - c. Click the *Create* button to add a new middleware server.
 - d. In the *Middleware Server Detail* section, *Basic Info* tab, add the following fields:
 - Server Name: ASPM_CLOUD
 - System Component: SAM_ASPM_PUBIC_CLOUD
 - **RFC Destination:** [Select the ASPM RFC destination you previously created]

	ers									
Basic Search Parameters									_	
* Mobile Application: SAP Ass Server Name: Serial No:	et Manager	~	Server Port: 00000							🕅 Search
Search Result										
View: [Standard View] \sim	Print Version E	xport ~			2	24				
Server Name	Port Serial No	Mobile App	Lock Flag Disat	ele Outb. Trigger	Created On					
1.000										Create
ASPM_Cloud	7003 SCP	SAP_ASSET_MANAGER	2005		10.02.2020 16:29:38	138				
	ail (Display Moo	le)								
Middleware Server Deta Change Basic Info Additional F		le)					 			
🖉 Change			*Ser	ver GUID:						
Change Basic Info Additional F	Properties		*Ser	ver GUID: * Port:						
Change Basic Info Additional F Mobile Application: * Server Name:	Properties SAP Asset Manager		*Ser							
Change Basic Info Additional F Mobile Application: * Server Name:	Properties SAP Asset Manager ASPM_Cloud		*Ser							
Change Basic Info Additional F Mobile Application: * Server Name: * Middleware Svr SerNo:	Properties SAP Asset Manager ASPM_Cloud		*Ser							
Change Basic Info Additional F Mobile Application: * Server Name: * Middleware Svr SerNo: Server URL (FQDN):	Properties SAP Asset Manager ASPM_Cloud		* Ser							
Change Basic Info Additional F Mobile Application: * Server Name: * Middleware Svr SerNo: Server URL (FQDN): Target Host:	Properties SAP Asset Manager ASPM_Cloud	2005	* Ser							
Change Basic Info Additional F Mobile Application: * Server Name: * Middleware Swr Servic Server URL (FODN): Target Host: Tenant Id:	Properties SAP Asset Manager ASPM_Cloud SCP SAM_ASPM_PUBL	2005								
Basic Info Additional F Mobile Application: * Server Name: * Middleware Svr SerVo: Server URL (FODN); Target Host: Target Host: Gystem Component: FFC Destination: UI Host Name:	Properties SAP Asset Manager ASPM_Cloud SCP SAM_ASPM_PUBL ASPM_CLOUD_CC	2005 IC_CLOK]			
Change Basic Info Additional F Mobile Application: * Server Name: * Middleware Sw SerNo: Server URL (FODN): Target Host: Tenant Id: System Component: RFC Despination: UI Host Name: Local Outbound Trigger Port:	Properties SAP Asset Manager ASPM_Cloud SCP SAM_ASPM_PUBL ASPM_CLOUD_CC0 00000	2005 IC_CLOL INNECTION (G): ASPM_CL]			
Change Basic Info Additional F Mobile Application: Server Viane: Middleware SV Servic Server URL (FODN): Target Host: Tenant Id: System Component: RFC Destination: UI Host Name: Local Outboard Trigge Port Outboard Trigge Pure I. Type:	Properties SAP Asset Manager ASPM_Cloud SCP SAM_ASPM_PUBL ASPM_CLOUD_CC0 00000	2005 IC_CLOL INNECTION (G): ASPM_CL]			
Change Basic Info Additional F Mobile Application: Server VRL (FQDN) Target Host: Ventor Ventor RFC Destination: UI Host Name: Local/Outboard Trigger VRL Type: Outboard Trigger VRL Type:	SAP Asset Manager ASPM_Cloud SCP SAM_ASPM_PUBL ASPM_CLOUD_CO 00000 Use FQDN when av	2005 IC_CLOL INNECTION (G): ASPM_CL]			

- e. Select the Additional Properties tab. Add the following properties:
 - Property Name: AUTH_OAUTH_RFC
 - Property Group: AUTHENTICATION
 - Property Value: [RFC destination created for oAuth token]
 - Property Name: AUTH_TYPE
 - Property Group: AUTHENTICATION
 - Property Value: OAUTH
 - Property Name: PATH_PREFIX
 - Property Group: URL_PATH
 - Property Value: [/ain or /aspm depended on Asset Central API version]

liddleware Server Mana	gement			
earch Middleware Ser	vers			
Basic Search Parameters				—
* Mobile Application: SAP As Server Name: Serial No:	set Manager	Server Port:		()) Search
Search Result				
View: [Standard View] ~	Print Version Export ~		2	
Server Name	Port Serial No. Mobile App	Lock Flag Disable Outb. Trigge	r Created On	Create
ASPM_Cloud	7003 SCP SAP_ASSE	T_MANAGER_		
Middleware Server Det	ail (Display Mode)			
Basic Info Additional	Properties			
Property List				
Property Group	Property Name	Property Value		
AUTHENTICATION	AUTH_OAUTH_RFC	DCA_TEST_TOKEN_URL		
AUTHENTICATION	AUTH_TYPE	OAUTH		
URL_PATH	PATH_PREFIX	/aspm		

You've configured which ASPM system you're connecting to.

4. Click the Save button to save your new settings.

5.2.1 Checking the Readiness of the ASPM System

The ASPM readiness check program on the SAP GUI checks the readiness of the ASPM checklist feature.

(i) Note

Before following the instructions in this topic, ensure that you've performed the Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253] procedure.

The readiness check program checks your set-up (performed in the Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253] procedure), such as the system component. If your configuration has an error, a red light displays on the output that isn't set up properly. The /syclo/admin set-up is also completed you've selected certain options listed in this topic.

Using the SAP GUI, execute the program /MERP/CORE_READINESS_CHK_PROG to run the readiness check. The selections you make in this procedure are all found in the main *Middleware server management - ASPM* section. See the Readiness Check for Authenticated GIS Maps [page 261] procedure for details on the *GIS Offline Maps* section.

SAP Asset Manager Readiness check	report
¢	
Mobile app	SAP_ASSET_MANAGER_
Middleware server management - ASPM	
Run readiness check only	
Reuse ACI Configuration	
RFC Destination	
 oAuth profile 	
O oAuth RFC	
oAuth Profile/RFC name	
GIS Offline Maps	
Run Check only	
GIS RFC Destination	

The readiness check program gives 3 options to check or complete the ASPM checklist for SAP Service and Asset Manager:

Run Readiness Check Only

This checkbox disables the rest of the inputs on the screen if checked. Choosing this option runs the program in check-only mode. No RFC destination or configuration is made. Select this option if you've performed all the steps in Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253]. Running the readiness check only confirms that no steps were missed. If there are errors in your set-up, a red light displays by the output. You can then use the transaction code for that output to fix the issue.

Input

SAP Asset Manager Readiness che	eck report
()	
Mobile app	SAP_ASSET_MANAGER_
Middleware server management - ASPM	

Output

In the following sample screenshot, the red light result means that the RFC connection test used to set up the ASPM checklist feature has failed the connection test. To fix:

- 1. Enter transaction code *SM59* and test the connection.
- 2. If the connection fails, fix the issue by using a proxy. Make sure that configurations such as user credentials are correct.
- 3. Rerun the check program after fixing any issues to ensure a green light is displayed.

SAP Asset Manager Readiness check report
SAP Asset Manager Readiness check report
Check configuration activation
Configuration activated
Check SAP Asset Manager connection setting
OOM Mobile app system component found
OOM ASPM Cloud MDW server config exists.
OOM RFC destination Z ASSET CENTRAL TEST OP exists
• OO RFC connection test for Z_ASSET_CENTRAL_TEST_OP failed

Reuse Asset Central Integration Configuration

Use this checkbox to reuse the ACI app if it exists. Selecting this option uses the same RFC destination and authentication properties to create a new server configuration.

Input

Use this option if *Step 3d* wasn't completed in the Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253] procedure and you want to result the RFC destination used for ACI configuration to complete the set-up.

SAP Asset Manager Readiness check	report
[] []]]]]]]] []] []]] []] []] [
Mobile app	SAP_ASSET_MANAGER_
Middleware server management - ASPM	ר ב

Error Output Example

This option uses the ACI middleware configuration to create the ASPM_CLOUD server configuration for SAP Service and Asset Manager. If ACI configuration doesn't exist, use the *Input RFC Destination* option to create the configuration.

The red light shown in the following example screenshot shows the error thrown when there's no ACI configuration in the customer system to reuse. If a red light is displayed, complete the set-up, then run the check program in reuse mode to complete the ASPM checklist set.

SAP Asset Manager Readiness check report
AP Asset Manager Readiness check report
heck configuration activation
Configuration activated
heck SAP Asset Manager connection setting
Mobile app system component found
<pre>ACI_CLOUD MDW server configuration missing.</pre>

Input RFC Destination

Create the RFC destination or middleware server configuration: Using the *RFC Destination* section, give an *RFC Destination*, select an *oAuth Method* and *oAuth Value*. An RFC destination and/or middleware server configuration is created if they don't already exist.

Use this option if *Step 3d* wasn't completed in the Setting Up an ASPM Connection to the ASPM System to Use Checklists [page 253] procedure and you want to complete the rest of the set-up-up, along with the RFC destination creation. Once the destination is created, or if the destination exists, but the ASPM feature set up in /*SYCLO/ADMIN* doesn't exist, this program completes the set-up with the RFC destination.

If the RFC destination and middleware configuration don't exist; the program redirects to the *RFC Destination Creation* screen. Once the RFC destination is ready, it creates a management entry for the middleware server in the configuration tables for SAP Service and Asset Manager.

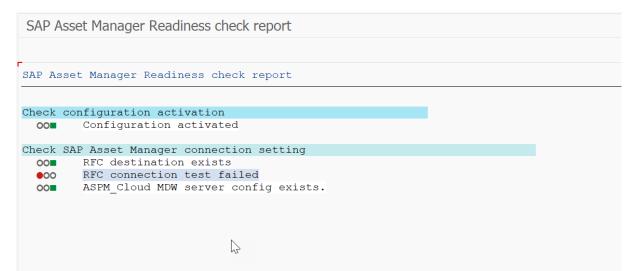
O Note

For SAP_BASIS release 752 and above, use the radio button *oAuth Profile* and property *AUTH_OAUTH_PROFILE*. For earlier versions, use the radio button *oAuth RFC* and property *AUTH_OAUTH_RFC*.

Input

SAP Asset Manager Readines	ss check report	
Mobile app	SAP_ASSET_MANAGER_	
Middleware server management - ASPM		
Run readiness check only		
Reuse ACI Configuration		
RFC Destination	ASPM_CLOUD_CONNECTION	
 oAuth profile 		
O oAuth RFC	_	_
oAuth Profile/RFC name	ASPM_CONNECTION	

Output



The /SYCLO/ADMIN ConfigPanel entry the ASPM readiness check program checks or creates is shown in the following example:

Middleware Server Manage	ement					
Search Middleware Servers						
Basic Search Parameters						_
* Mobile Application: SAP Asset Ma Server Name: Serial No:	anager	Server Port: 00000				
Search Result						
View: [Standard View] V	rint Version Export V					۲
Server Name Por	t Serial No.	Mobile App	Lock Flag	Disable Outb. Trigger	Created On	
ASPM_Cloud		SAP_ASSET_MANAGER_				
Change Basic Info Additional Prop	erties					
Mobile Application:	SAP Asset Manager		* Server GUID:			
* Server Name:	ASPM_Cloud		* Port:			
* Middleware Svr SerNo:	SCP					
Server URL (FQDN):						
Target Host:						
Tenant Id:						
System Component:	S					
RFC Destination:	ASPM_CLOUD_CONNECTION	(G):ASPM_CLOUD_CONNECTION				
UI Host Name:						
Local Outbound Trigger Port:	00000					
Outbond Trigger URL Type:	Use FQDN when available					
Lock Flag:						
Disabled for Outbound Trigger:						

Troubleshooting

If the output of the readiness check shows the RFC connection test failed, perform a manual test. Make sure to add a proxy and/or certificate to *STRUST* if needed.

You can manually change the middleware server configuration via /SYCLO/ADMIN.

Next Steps

If you're using SAP Service and Asset Manager with authenticated GIS, continue to the Readiness Check for Authenticated GIS Maps [page 261] topic.

5.2.1.1 Readiness Check for Authenticated GIS Maps

Context

eadiness of the ASPM System [page 256] topic fo	opriate ASPM readiness check. See the Checking the or details.
GIS Offline Maps	
Run Check only GIS RFC Destination	

Procedure

1. Run Readiness Check Only

Example of Run Check only output:

SAP Asset Manager Readiness check report
SAP Asset Manager Readiness check report
Check configuration activation
Configuration activated
Check SAP Asset Manager connection setting
Check SAP Asset Manager Check SAP Asset Manager Check SAP Asset Manager Check SAP Asset Manager Check S

2. **Create the RFC Destination:** Creating the RFC destination stores the GIS server login credentials and adds them to the mobile application parameter.

Example of *GIS RFC Destination* and config parameter output:

SAP Asset Manager Readin	ess check report			
SAP Asset Manager Readine	ss check report			
Check configuration activ	ation			
Configuration ac	tivated			
Check SAP Asset Manager c	onnection setting			
External connect	ions app parameter not o	configured		
oom RFC destination	ARCGIS CONNECTION TOKEN	URL exists		
•00 RFC connection t	est for ARCGIS CONNECTIO	ON TOKEN URL f	ailed	
External connect	ions app parameter canno	ot be configur	ed without	RFC

The /SYCLO/ADMIN ConfigPanel entry the Authenticated GIS readiness check program checks or creates is shown in the following example:

[General	Mobile Status Setting	Conversion Exit Setting	System C	components	Parameters	Client Globals	User Attributes						
Mo	obile Application obile App. Desc			Release	:									
-	arameter L													
	Import/Exp	oort ~												
	RecNo	Parameter Group)	٣	Param. Nan	ne		Param. Value		¶ So	cope	Dep. Rec	Active	No Change
	00000003	5 EXTERNALCON	VECTIONS		ARCGIS			ARCGIS_CONNE	CTION_TOKEN_URL	Ap	oplication	0000000000	\checkmark	

6 Field Operations Worker Configuration

SAP Service and Asset Manager for Field Operations Worker uses the digital core with SAP S/4HANA for task driven activities and rounds. It supports workers who perform asset inspections and checks with focus on measurement points and on smaller services and repairs.

Field Operations Worker, or FOW, is an add-on component to SAP Service and Asset Manager. If you don't see FOW features while using the SAP Service and Asset Manager application, or in the ConfigPanel, your site hasn't installed the component.

Field Operations Worker adds the following functionality to the core SAP Service and Asset Manager application:

- View routes data: A route is comparable to a work order in the base SAP Service and Asset Manager application.
- View stops data: A stop in Field Operations Worker is comparable to an operation in the base SAP Service and Asset Manager application. A route is composed of one or more stops.
- View asset information: An asset in Field Operations Worker is comparable to a piece of equipment in the base SAP Service and Asset Manager application. Assets are located at an FOW stop.
- Use field data capture to take readings on measurement points. Measurement points are located on assets or a set of assets at a route stop.

6.1 Differentiating a Base SAP Service and Asset Manager Work Order from a Field Operations Worker Order

Creating rules based on order types affects synchronization processing and order downloads to the mobile devices of your users who use the Field Operations Worker component.

Prerequisites

Address the following before performing the procedure:

- The order types for work orders that are downloaded to technicians using the Field Operations Worker component are already determined.
- The person performing the procedure has access to the Config Panel and permissions to change settings.

Context

(i) Note

Field Operations Worker orders are a subset of the base SAP Service and Asset Manager application work orders.

The following procedure modifies the synchronizing behavior of the SAP Service and Asset Manager application, along with the Field Operations Worker component. After you complete the procedure, only orders with a given order type of *PMO2* are downloaded to the FOW component. In the procedure, you change the *ORDER_TYPE* filter in the OMDOs involved in order synchronization. Specifically, you add a rule to the filter in the **SAM2310_ROUTE** OMDO to include only the desired order type.

If you don't create a rule for the *PMO2* order type, then that order type is excluded from work order download synchronization processing. If the FOW orders are excluded from synchronization processing, then the orders aren't present on the mobile clients of your users.

Procedure

1. Click the *OData Mobile Data Object Configuration* link, then click the *Data Filter* tab from the main ConfigPanel page. Be sure to have your desired mobile application chosen in the *Mobile Application Filter* field at the top of the page.

Selecting an application filters the *OData Mobile Data Object by Mobile App* choices in the left panel with only OMDOs available in your application.

- 2. Expand the OData Mobile Data Object by Mobile App list on the left and click **SAM2310_ROUTE**.
- 3. Select the Data Filter tab.
- 4. Click the Operation READ > Data Distribution > ORDER_TYPE > node in the Defined Filters list.
- 5. Create a rule using the following parameters if the rule doesn't already exist:
 - DOF Rule Type: Static Value in Range Format
 - Sign: Inclusive
 - Option: =
 - Low Value: PM02 Maintenance order
 - Ensure the Active Flag box is checked

* oMDO Id:	SAN ROUT	F				*0	cription: Route	
						* Desc	inption: Route	
* Mobile Application:	SAP Asset Manag							
* oMDO Handler:	/MERP/CL_PM_F	OW_ROUTE_OD :	oMDO I 🧹					
General Setting Technical Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Ass	signment	
ined Filters		*	Rule Editor					
Operation - READ			Operation	READ		Filter Name:	ORDER_TYPE	
ASSIGNMENT_TYPE*			Object Name	AUFK		Reference Field Name:	AUART	
F COMP_CODE			Data Filter Rule Key	SAM ROUTE.RE	AD.ORDER_TYPE			
CO_AREA			Filter Rule Type		_			
WAIN_WORK_CENTER*			T III T T T T T T T T T T T T T	. Otalic value in realige	able Format +			
P OBJECT_DISTRIBUTION_MODE*			Enter Range	Value				
F ORDER TYPE*			Sign: Inclu	Isive V Option: =	~			
PLANNER_GROUP				2 - Maintenance order	~			
PLANNING_PLANT*				z - waintenance order				
PLANT*			High Value:		~			
PM_PHASE*			Active Flag: 🗸					
DATE CLOSE								
T DATE COMPLETION			Rule List					
T DATE_RELEASE			Rule No.	Rule Type Rule Value			Active Flag	
F OPER_EXCL_SYST_STAT*				RANGE PM02			-	
PRT_ONLY*			00001	RANGE PMU2			~	
WO_EXCL_SYST_STAT*								
WO_EXCL_USER_STAT								

6. Influence Field Operations Worker orders using the following filters found in Depration - READ

Standard Filter Tif needed:

- WO_EXCL_SYST_STAT
- WO_EXCL_USER_STAT
- WO_INCL_SYST_STAT
- WO_INCL_USER_STAT
- 7. Save your changes.

Results

After you finish the procedure, both Field Operations Worker orders and base SAP Service and Asset Manager work orders are downloaded by the SAP Service and Asset Manager application.

7 Safety Technician Configuration

7.1 Configuration Prerequisites and Limitations - Safety Technician Persona

Prerequisites

There are a few guidelines that must be applied to the SAP system for the user to be able to use the safety technician persona:

- The https://me.sap.com/notes/3262754 SAP note: On ECC, SMERP software component, Safety Technician persona is available **only on SP13 or higher**.
- The https://launchpad.support.sap.com/#/notes/2551483 SAP note: No transfer of lock number for item maintenance for API.
 Lock numbers are not transmitted during the maintenance of existing items in the work clearance document using the API used by the SAP Service and Asset Manager mobile application. This is necessary because safety technician persona can enter the physical lock number during the tagging process.
- The https://launchpad.support.sap.com/#/notes/3277604/ SAP note: Data provision for Asset Management.

Use BAdI/Exit to effectively delta-synchronize the WCM data for SAP Service and Asset Manager.

• The https://launchpad.support.sap.com/#/notes/2431765 SAP note: Processing the user status in the APIs for WCM objects.

Use the WCM APIs to execute function codes (ACTION_EXECUTE suffix) to support setting or resetting the user status. User status can be entered in Mobile Status configuration at the Syclo Configpanel.

Limitations

Currently, the Safety Technician persona has the following limitations:

- When creating and configuring usage types [page 270]:
 - The following Operational Cycle types are supported:
 - Tagging cycle without temporary untagging phase
 - No items
 - The following Operational Cycle types are **not** supported:
 - Tagging cycle with temporary untagging phase
 - Test cycle
- When creating and configuring work orders as dependent objects [page 271], assignments at the operation level are **not** supported, only at work order header level.

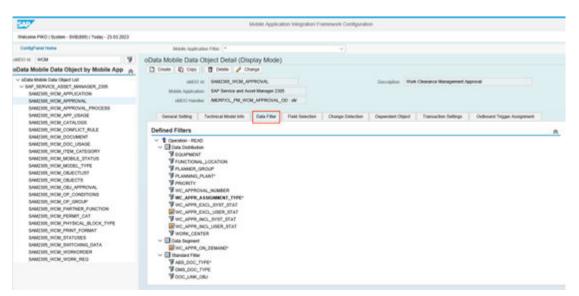
7.2 oMDO Configuration

Context

To change the oMDO data filters, follow these steps:

Procedure

- 1. In the SAP GUI, navigate to the /n/syclo/configpanel transaction to open the syclo configuration panel.
- 2. Under oData Channel Integration Settings, navigate to oData Mobile Data Configuration.
- 3. By selecting the *oMdo* required, you will find the filters in the *Data Filter* section.
- 4. Navigate to Change mode and add any data filter.



Assignment types

The following work permit assignment types (same for safety certificates) are supported:

- 1: User Plant (the user must add the IWK user parameter)
- 2: User Work Center (the user must add the VAP user parameter)
- 3: User Planner Group (the user must have the IHG user parameter setup)
- 4: Partner Function
- 5: Selection Variant
- 6: Operational List + Selection Variant
- D: Dependency queue

- Z: Other (implement BADI)
- 5. On the SAP GUI, navigate to the SU3 transaction and select the Parameters tab.
- 6. Add a user parameter identifier with the value.

Password	TOTP Re	gistration			
Jser	PIND	User with Classic Address			
Changed By	PIND	06.10.2022 13:29:34	Status	Saved	
Address	Defaults Pa	rameters			
		12000100	2		
Parameters	<u>)</u> (6) (4		5		Short Description
Parameters	<u>)</u> (6) (4	▼NMY. ⊕≪.			Short Description Work Center
Parameters	<u>)</u> (6) (4	후 H M Y . · · · · · · · · · · · · · · · · · ·	-		
Parameters SET/GET Para AGR	<u>)</u> (6) (4	Parameter Value			Work Center
Parameters SET/GET Para AGR IVVK	<u>)</u> (6) (4	Parameter Value		_	Work Center Maintenance planning plant

On demand structure configuration

It is possible to disable or enable sampling of some entities if required. For example, you can disable WCMApplicationLongtext, WCMApplicationAttachments and other such entities.

General Setting Technical Model Info	Data Filter Field Se	lection Change Dete	ction Dependent Object	Transaction Settings	Outbound Trigger Assignment
efined Filters	Table Rule Edito	r			
S Operation - READ Data Distribution	Operation	READ	Filter Name	WCM_APP_ON_DEMAND	>
✓ ☐ Data Segment	Reference Table Name:	MERP/PM_WCMAPP_	ONDMND_		
WCM_APP_ON_DEMAND*	Rule Category:	Static Table Rules	~		
Security Standard Filter	WRK_REQ. AC	the second se			
	LONGTEXT: AC				
	Rule List				
	WRK_REQ	ATTAC	HMENT PARTN	IER LONG	TEXT
	x	х	х	х	
	Test of the second s				

7.3 Mobile Application Parameters

Use specific mobile app settings to get some entities disappear and make the signature optional. You can change these settings on the *Mobile App Configuration* page.

- 1. Navigate to the Syclo ConfigPanel and then select Mobile Application Configuration
- 2. Navigate to Mobile App and then select the Parameters tab.

The possible values for safety technician persona are as follows (see figure below):

-	arquiteret Prov										
(G Import/Export	-								Search	٩
	RecNo	Parameter	Param. Name	Param, Value	7	Scope	Dep. Rec	Active	No Change	Comment	
	0000000190	WCM	Approval, Show	Y		Application	0000000000			WCM: Show (Y) or Hide (N) Work Approval object in the Mobile Application	
	0000000191	WCM	Documentitem SignatureEnabled	Y		Application	0000000000	0	1	WCM: Enable (Y) or Disable (N) Signature for Operational Items	
	0000000202	WCM	LockNumber Mandatory	N		Application	0000000000	0	0	WCM: Entering the Lock Number is Mandatory (Y) or Optional (N)	

There are three available options for using the application:

- Approval. Show. Enables or disables the display of Work Approval objects
- DocumentItem.SignatureEnabled. Enables or disables signature input during tagging or untagging of an operational item. When disabled, it also hides the signature panel.
- LockNumber.Mandatory. Users can set the Lock Number as mandatory or optional in the tagging process.

7.4 xChange

With the exchange framework, we also provide exchange detection. The exchange framework allows users to capture changes made in the backend to WCM objects. This is also highly customizable. You can choose which fields you want to check, and you can also enter data filters.

To access the xChange field detection and select specific fields of the object:

- 1. Navigate to the Configuration panel, select Exchange Object Configuration.
- 2. Navigate to Plant Maintenance and select the SAM2305*WCM* objects.

Exchange Object By Application Area 😞 Exchange Object Detail (Display Mode)

Cost Accounting Cross-Application	Create Cop	y 📋 Delete 🥒 Change						
Cross-Application Materials management	Technical Setting	s Change Detection Field Selection	Change Detect	ion Condition Filter	Data Segment Settings	Linkage Settings	Push Settings	
Plant maintenance	rounnear county		Unange Denec		oun organism oraniga	Lininge Countys	1 dan oottings	
SAM2305_CAPACITY_REQUIREMENTS	Exchange Obje	ect Info						
SAM2305_CHARACTERISTIC								
SAM2305_CLASS	Exchange Object:		Exch. Obje	ct Desc.: Work Permit E	Exchange Handler			
SAM2305_CLASS_CHARACTERISTIC SAM2305_CODE_GROUP	ExchObject Handler:	/MERP/CL_PM_WCMWAPINR_EX						
SAM2305 CONN OBJ								
SAM2305 DEVICE	Exchange Obje	ct Field Selector			Selection Prope	osal		
SAM2305_DEVICE_CAT		Search:		CAL CAL	Get Proposal			
SAM2305_DEVICE_LOC	Field Catalog		Active Flag	Short Description	A CHI CHI PRODUM			
SAM2305_DISCONNECTION_DOCUMENT SAM2305_ENTRYLIST	 Table - WC/ 			WCM: Application	Sort Options			
SAM2305_ENTRYLIST			1					
SAM2305 FUNC LOCATION	Field - AF	DATE	\checkmark	Actual finish date	By Field Name			
SAM2305_INSPECTION_LOT	Field - AF	TIME	4	Actual EndTime	By Field Description			
SAM2305_INSTALLATION	Field - AN	ILZU	1	OverallCndtn TechSys	O By DDIC Sequence			
SAM2305_LAM_OBJECT_DATA	Field - AS	SDATE	2	Actual start date				
SAM2305_MEASUREMENT_DOCUMENT	Field - AS	STIME		Actual StartTime				
SAM2305_MEASURING_POINT SAM2305_METER_READING_DOC	Field - AL	IENT.						
SAM2305_METER_READING_UNIT			Subnetwork of					
SAM2305_MR_PERIODIC_DOC	Field - BC		1	Basic start date				
SAM2305_NOTIFICATION	Field - BE	EGRU	4	AuthorizGroup				
SAM2305_NOTIFICATION_PUSH	Field - B1	TIME	1	Basic start time				
SAM2305_OBJ_CHAR_VALUE	Field - C/	ATFLG1	1	Catalog Exists				
SAM2305_OBJ_CLASS_ALLOCATION	Field - C/	ATFLG2		Catalog Exists				
SAM2305_REGISTER	Field - CI	DATE	v	Completed on				
SAM2305_SERIAL								
SAM2305_STREET_ROUTE	Field - Ch		V	Changed on				
SAM2305_TECH_OBJ_STATUS	Field - Ch	INAME	V	Changed By				
SAM2305_WCM_APPROVAL SAM2305_WCM_DOCUMENT	Field - Ch	TIME	1	Time Changed				
			1					

You can also add data filters similar to oMdos:

Technical Settings Change D						
	etection Field Selection	Change Detection Co	ndition Filter	Data Segment Settings	Linkage Settings	Push Setting
kchange Object Info						
Exchange Object: SAM2305_WCM	/_DOCUMENT	Exch. Object Desc.:	WCM Docume	ent xChange handler		
chObject Handler: /MERP/CL_PM_	WCM_WCNR_EX_					
ception Settings						
ore Data Creation.	ata Deletion: 🛄 Ignore D	Pata Update:				
		Pata Update:				
change Object Filter Rule		eata Update:				
cchange Object Filter Rule efined Filters Filter - EQUIPMENT	e Definition 					
change Object Filter Rule efined Filters Filter - EQUIPMENT Filter - FUNCTIONAL_LOCATH	e Definition					
cchange Object Filter Rule efined Filters Filter - EQUIPMENT	e Definition			Reference Field Name	:	
Change Object Filter Rule efined Filters Filter - EQUIPMENT Filter - FUNCTIONAL_LOCATH Filter - PLANNER_GROUP	e Definition			Reference Field Name	:	
Change Object Filter Rule efined Filters Filter - EQUIPMENT Filter - FUNCTIONAL_LOCATIV Filter - PLANNER_GROUP Filter - PLANNING_PLANT	e Definition		ige Format	Reference Field Name	:	

7.5 Supported usage types

You can create and configure the usage types. There are several customization options, the most important of which is *Operation Cycle - Specification*.

The current release supports the following two types:

- Tagging cycle without temporary untagging phase
- No items.

Change Vi	ew "Maintain Usa	ges": Details	
🤣 New Entrie	s 🗈 🗟 🕫 🞝 🕞 🕷	3	
Planning Plant	1000 Hamburg		
Usage	004		
Descript. Usage	Reduced Tagging Cycle	(w/o_Temp)	
Operational Cycle			
Specification	Tagging cycle without	temporary untagging phase	•
Tagging Phase		Temporary Untagging Phase	
√ Tag		Untag Temporarily	
Print Tag		Print Test Tag	
Untagging Phas	e		
✓ Untag			
1			

Specification	Tagging cycle without temporary untagging phase	-
	Tagging cycle with temporary untagging phase	
Tagging Phase	Test cycle	
rugging r nuse	Tagging cycle without temporary untagging phase	
✓ Tag	No Items	

7.6 Work Order as a Dependency

A new release related to the safety technician persona is that work orders can be dependent objects. This means that if the persona is enabled, you have the ability to load work orders that are associated with the related work permits.

(i) Note

In this release, only assignments at the work order header level are supported for the safety technician persona. Operation level assignments will be supported in a later version.

To enable this configuration:

- 1. Navigate to the Configuration panel, select *oMDO* configuration, then select SAM****_WORK_ORDER_GENERIC
- 2. Navigate to Data Filters and add a D Assignment Type to the object.

oData Mobile Data Object Detail (Change Mode)

* M	oMDO Id:	SAM2305_WORK	-						Descry	ption: Wo			
		/MERP/CL_PM_W			~								
General Setting	Technical Mode	el Info Data Fi	ltor	Field Selection	Change Det	lection	Dependent Object	Transaction Set	tings	Outbound 1	Trigger Assignment		
Defined Filters			~	Rule Edito	r								
> Soperation - CR > Operation - RE				Oper	ration: READ				F	ilter Name:	WO_ASSIGNMENT_	TYPE	
🗸 🔝 Data Distribu				Object !	Name: MERF	PCORE	OMDO_DISTR_ST	R	Reference F	ield Name:	WO_ASGMNT_TYPE		
F COMP_CO	DE			Data Filter Rule	Key: SAM2	305 WO	RK ORDER GENERIC	READ.WO ASSIGN	NMENT TY	PE			
CO_AREA				Filter Rule	Type: Static	Value in I	Range Table Format	~					
MAINT_PL													
FORDER C				Enter Ran	ge Value								
FORDER_T				Sign:	Inclusive	~ 0	ption: =	~					
	FUNC_ASSIGN			Low Value:	1 - Header Lev	vel Perso	on Responsible	~					
PARTNER				High Value:	3 - Sub-opera	tion Leve	el Personnel No Assignn	ent					
PLANNING				Active Flag:	4 - Capacity F	Requirem	ent Personnel Assignme	nt					
PLANT.					5 - Header Le	vel Plan	ner Group						
F PM_PHASE							vel Work Center						
VO_ASSIC V Data Segmen	INMENT_TYPE*			Rule List	7 - Header Le	vel Busin	ness Partner						
PARTNER				Rule	8 - Header Le	evel Work	k Center				Active Flag		
	ER_ON_DEMAN	D*			9 - Free Sear							8	
> Security				00002	A - Multi Reso	ource Sch	heduling (MRS)				V		
> Standard Filte					D - Depender	ncy Queu	.0						
> Soperation - UP	DATE				Z - Other								

7.7 Assignment Management

Safety Technicians can see a filtered list of items on their mobile devices that are assigned to them (see Filtering Your Assigned Objects). This applies to the following list screens:

- Operational Items
- Isolation Certificates
- Work Permits
- Work Orders
- Work Approvals

You can enable the Assigned to me filtering option for users by the following Assignment Types:

- 4 Partner Function (Approval Roles + Partner Functions): See Assignment Configuration by Assignment Type 4 Partner Function [page 272]
- 5 Selection Variant: See Assignment Configuration by Assignment Type 5 Selection Variant [page 278]
- 6 Operational List (Operational list + Selection Variant): See Assignment Configuration by Assignment Type 6 - Operational List + Selection Variant [page 283]

(i) Note

5 - Selection Variant and 6 - Operational List (Operational list + Selection Variant) are non-regular Assignment Types, dedicated to provide additional assignment functionalities. You can create selection variants, define filters for them, and assign the variant to users. Then the filters from the variant will be used during a sync. When only these assignment types are set up, regular oMDO filters are not taken into account during the sync.

7.7.1 Assignment Configuration by Assignment Type 4 -Partner Function

Context

To enable the *Assigned to me* filtering option for users by the *4 - Partner Function (Approval Roles + Partner Functions* Assignment Type, perform the following steps:

(i) Note

- This procedure applies to Work Permits (and related Work Orders, Work approvals) and Isolation Certificates (and related Operational Items).
- Regarding the order of steps, it does not matter if you perform the SAP GUI or Configuration Panel changes first.
- If you want to enable for Safety Technicians to filter for objects assigned to other users as well, perform the additional steps from Configuring the ShowAssignedToList parameter [page 276].

Procedure

SAP GUI changes

- 1. Create a new (or change existing) Work Permit or Safety Cerificate.
 - To create a new Work Permit, use the transaction code WCTK.
 - To create a new **Safety Cerificate**, use the transaction code wCT6.
- 2. After the Initial Screen, click the *Create Partner* icon at the top of the Create Work Permit / Safety Cerificate screen.

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O Note

To do that, first you have to fill in the Work Center field.

- 3. On the *Partners* screen, fill in partner data as follows:
 - 1. Partner Function: From the drop-down, select Person Responsible.
 - 2. *Partner*: Enter the Personal Number of the user, who you would like to assign to the Work Permit / Safety Cerificate.
 - 3. All other fields will be filled automatically.

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O Note

- If the user does not have a Personal Number yet, you need to create it in the SAP HR Module.
- By using *Person Responsible* as *Partner Function*, you can assign a specific SAP user to the Work Permit / Safety Cerificate.

Configuration Panel changes

- 4. In the SAP GUI, navigate to the /n/syclo/configpanel transaction to open the Configuration Panel.
- 5. Under oData Channel Integration Settings, navigate to oData Mobile Data Configuration.

SAP	Mobile Application Integration Framework Configuration	
		Log C
Nobile Application Configuration		
Seneral Info Mobile Application Configuration Define basic information about mobile applications, such as release, description. © Component Assignments Define component Assignments Define component Assignments Geosphatial Framework Settings © Geosphatial Service Definitions Define Geosphatial Service Provider Information, Object Type Assignment etc.	OData Channel Integration Settings o Obta Service Assignment Assign standard Obta Service to the mobile application. oData service model will be generated based on configuration setting. o Obta Model Configuration Mobile application: Obta Model definition for entity type, entity set, association, association set, navigation property etc. o Obta Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Change Detection Settings • EFI Assignment Enhancement Pranework implementation Trigger is assigned to Exchange Objects. • Exchange Object Configuration Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile application.
Transaction Management Setting Intransaction Queue Definition Define Inbound Transaction Queue Settings Data Staging Settings Data Agent Definition Define data store supplying agent settings. Data Store Definition Define data store settings, data storage, data agent assignment, schedule, map information etc.	RFC Channel Integration Settings	Push Framework Settings Push Scenario Definition Fush scenarios can be derired to push data to mobile devices when qualified datasets changed in the backend. © Outbourd Trager Configuration Triggers to interface with external systems are defined. © Subscription Agent Definition Defines how subscription requests for backend system data are handled.
System Configuration		
System Settings a Technical Settings Framework technical settings such as logging level, conversion exit	Security Settings a Mobile Authorization Settings Mobile application specific security settings can be defined for integration framework, mobile application, or class handlers.	

- 6. From the list of oMDOs, select the relevant object and click *Change*:
 - SAM2310_WCM_DOCUMENT for Safety Cerificates
 - SAM2310_WCM_APPLICATION for Work Permits

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	General Setting Defined Filters >	Technical Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Settings	> ≞

- 7. Under the *Data Filter* tab, select:
 - WC_DOC_ASSIGNMENT_TYPE for Safety Cerificates
 - WC_APP_ASSIGNMENT_TYPE for Work Permits

* ONDO Lit: SAM2310_WCM_DOCUMENT * Mobile Application: SAP Service and Asset Manager 2310 * Mobile Application: SAP Service and Asset Manager 2310 * ohdDO Handler: (MERPICL_PM_WCM_DOCUMENT_OD : of voltage) General Setting Technical Model Info Data Filter Filter Status Rule Editor Change Detection Dependent Object Transaction Settings Outbound Trigger Assignment * Operation - READ Operation: REAP/CORE_OMDO_DISTR_STR Reference Field Name: WC_DOC_ASSIGNMENT_TYPE © FURNING_PLANT Operation: NERP/CORE_OMDO_DISTR_STR Reference Field Name: WC_M_DOC_ASSIGNMENT_TYPE © FURNING_PLANT Static Value in Range Table Format V Data Filter Rule Key: SAU2310_WCM_DOCUMENT READ WC_DOC_ASSIGNMENT_TYPE © FURNING_PLANT Static Value in Range Table Format V Enter Range Value V © RULANING_PLANT Static Value in Range Table Format V Static Value in Range Table Format V © WC_DOC_EXCL_USER_STAT Static Value in Range Table Format V V V V © WC_DOC_INCL_USER_STAT VC_DOC_INCL_USER_STAT V Static Value in Range V V<	2			Mobile Application	Integration Framew	ork Configuration		
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8. From the Low Value drop-down list, choose 4 - *Partner Function (Approval Roles + Partner Functions)* as assignment type.

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(i) Note

Consider the following in the *Rule List* table, *Rule Value* column:

- If there is only one row with assignment type 4, then only the objects assigned to the user will be downloaded to the client (*Assigned to me* button will not be displayed).
- If there are two rows with assignment types 1 and 4 (see the screenshot above), then all the objects will be donwloaded to the client and the user can filter them with the *Assigned to me* button.
- 9. Under the *Data Filter* tab, select *PARTNER_FUNCTION*, then *VW Person responsible* from the Low Value drop-down list.

* oMDO Id:	SAM2310 WCM	PPLICATI	ION		* Descri	ption: Work Clearance Mana	igement Application of	MDO	📙 Save 💥 Car	cer
* Mobile Application:							• • •			
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FEQUIPMENT_NUMBE	ER		Object Name:	IHPA		Reference Field Na	me: PARVW			
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VC_APP_NUMBER VC_TYPE VORKCENTER Data Segment				le Type Rule Value			Active Flag			
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10. Click Save to exit Change Mode.

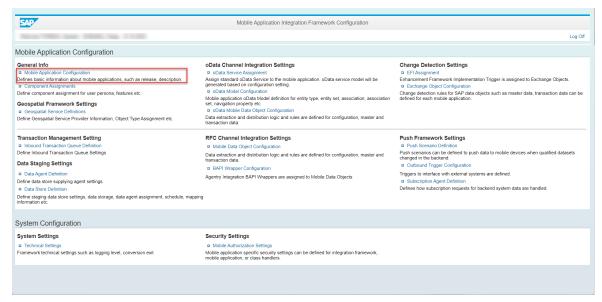
Configuring the ShowAssignedToList parameter

③ Note

The following steps are optional, perform them if you want to enable for Safety Technicians to filter not just their assigned objects, but the assigned objects of other specific users as well. This filtering option will be

available in the <i>Filte</i> Assigned Objects.	r menu, from the As	signed To drop-down	list. For more information, see Filtering Your
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Assigned To Select		>	
Usage Type			
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11. In the Configuration Panel, navigate to Mobile Application Configuration.



12. Select the application from the list, go to Parameters tab and click the ShowAssignedToList parameter.

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13. Enter Change Mode and set the Parameter Value to Y.

③ Note

- If the *Parameter Value* is *Y*, the user will see the *Assigned To* filtering option (filtering for other users as well).
- If the *Parameter Value* is *N*, the user will see the *Assigned To Me* filtering option (filtering only own assigned objects).
- 14. Click Save to exit Change Mode.

7.7.2 Assignment Configuration by Assignment Type 5 -Selection Variant

Context

To enable the *Assigned to me* filtering option for users by the 5 - *Selection Variant* Assignment Type, perform the following steps:

③ Note

Regarding the order of steps, it does not matter if you perform the SAP GUI or Configuration Panel changes first.

Procedure

SAP GUI changes

1. To create the Selection Variant, use the WCL4 transaction to open the *List Editing - Display Safety Cerificates* screen.

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2. Select the filters you would like to use and click Save.

3. Enter a name for the Selection Variant and click Save.

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4. Go to the SPRO transaction and navigate to Plant Maintenance and Customer Service > Work Clearance Management > Lockout/Tagout > Mobile Processing.

<	Display IMG		
	→ 😽 🚛 Existing BC Sets 👔 Release Notes Change Log Where Else Used More ~ Q	ď	Exit
	Structure		
	> Governance, Risk and Compliance		0
	> 🙆 Logistics Execution		
	> SCM Extended Warehouse Management		
	> Quality Management		
	V 🙆 Plant Maintenance and Customer Service		
	> 🙆 Master Data in Plant Maintenance and Customer Service		
	> 🔂 Maintenance Plans, Work Centers, Task Lists and PRTs		
	> 🙆 Maintenance and Service Processing		
	> 🙆 Information Systems for Plant Maintenance and Customer Service		
	> Maintenance Roles		
	System Enhancements and Data Transfer		-11
	V Work Clearance Management		-1
	> Master Data		-11
	> Approvals		
	✓ Lockout/Tagout		-1
	🗟 🔆 Maintain Usage for Work Clearance Documents		-1
	> Operational Steps		-1
	> Operational Cycle		-0
	🙆 🚫 Maintain Conflict Rules		
	> Operational Classes		
	Mobile Processing		
	🙆 🕑 General User Settings		
			_
	> 🚱 Customer Service		~

1. Go to the General User Settings and add the user to the list.

			nge View "Maintain General User Settir		
	V New Entries	5 16 88 88	More 🗸		🗇 🔗 Display 🗄
/laintain Gene	eral User Settings				6
User	Time Format	Time Zone	Date format Decimal Format		
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	24 Hour Format	V CET	YYYY.MM.DD (Gregori v1.234.567,89	~	
	24 Hour Format	V CET	DD.MM.YYYY (Gregori v1.234.567,89	~	
	24 Hour Format	V CET	DD.MM.YYYY (Gregori v1.234.567,89	\sim	
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	\bigcirc				(
	Position	Entry 1 of	5		

2. Go to the Plant-Specific User Settings, add the user to the list and assign the previously created Selection Variant to the user.

SAP		New Entries: Overview of Added Entries	
	✓ ○ ♣ 88 88 More ∨	융	රාව Display E
aintain Plant	-Specific User Settings		6
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Configuration Panel changes

- 5. In the SAP GUI, navigate to the /n/syclo/configpanel transaction to open the configuration panel.
- 6. Under oData Channel Integration Settings, navigate to oData Mobile Data Configuration.

SAP	Mobile Application Integration Framework Configuration	
		Log C
Nobile Application Configuration		
Seneral Info	Obata Channel Integration Settings o Obata Service Assignment Assign standard Obata Service to the mobile application. oData service model will be generated based on configuration setting. o Obata Model Configuration Mobile application oData Model definition for entity type, entity set, association, association set, avaigation property etc. o Obata Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Change Detection Settings • EFI Assignment Enhancement Pranework Implementation Trigger is assigned to Exchange Objects. • Exchange Object Configuration Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile application.
Transaction Management Setting	RFC Channel Integration Settings • Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data. • BAPI Wrapper Configuration Agentry Integration BAPI Wrappers are assigned to Mobile Data Objects ping	Push Framework Settings Push Scenario Definition Fush scenario can be defined to push data to mobile devices when qualified datasets changed in the backend. © Outbound Trigger Configuration Triggers to interface with external systems are defined. © Subscription Agent Definition Defines how subscription requests for backend system data are handled.
System Configuration		
System Settings a Technical Settings Framework technical settings such as logging level, conversion exit	Security Settings a Mobile Authorization Settings Mobile application specific security settings can be defined for integration framework, mobile application, or class handlers.	

7. From the list of oMDOs, select SAM2310_WCM_DOCUMENT and click Change.

SAP		Mobile Application Integ	gration Framew	ork Configuration				
								Log Off
ConfigPanel Home	Mobile Application Filter:	*		~				
oMDO Id: SAM2310_WCM_DOCUMENT F oData Mobile Data Object by Mobile App v oData Mobile Data Object List	Create Cop		nange		Work Clearage	Management Deserves		۵
SAP SERVICE ASSET_MANAGER_2310	Mobile Application:	SAM2310_WCM_DOCUMENT SAP Service and Asset Manager 2310 /MERP/CL_PM_WCM_DOCUMENT_OD : of		Description: Work Clearance Management Document			n	
	General Setting Defined Filters > Poperation - Filters	Technical Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Settings	> ≜

8. Under the *Data Filter* tab, select *WC_DOC_ASSIGNMENT_TYPE* from the list of filters.

AP		Mobile Application	Integration Framew	ork Configuration		
						Log
Mobile Application Filter:						
ata Mobile Data Object Detail (Chang	ge Mode)					
						Save 🗶 Cancel
*oMDO Id: SAM2310_WCM_DOO	CUMENT		*Description:	Work Clearance Management	Document	
* Mobile Application: SAP Service and Asse	et Manager 2310					
* oMDO Handler: /MERP/CL_PM_WCM						
General Setting Technical Model Info D	ata Filter Field Selecti	on Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Assignment	
Poperation - READ Image: Second Sec	Operation:	READ		Filter Name:	WC_DOC_ASSIGNMENT_TYPE	
FEQUIPMENT	Object Name:	/MERP/CORE_OMDO_DIS	TR STR	Reference Field Name.	WCM DOC ASGMNT_TYPE	
FUNCTIONAL_LOCATION	Data Filter Rule Key:	SAM2310_WCM_DOCUME	NT.READ.WC_DOC_AS	SIGNMENT_TYPE		
PARTNER_FUNCTION	Filter Rule Type:	Static Value in Range Table	Format 🗸			
PLANNER_GROUP	_					
F PRIORITY	Enter Range V	alue				
WC_DOC_ASSIGNMENT_TYPE*	Sign: Inclusi	ve 🗸 Option:	=	\sim		
WC_DOC_EXCL_SYST_STAT*	Low Value: 1 - Use	er Plant		~		
WC_DOC_EXCL_USER_STAT WC_DOC_INCL_SYST_STAT	High Value:			~		
WC_DOC_INCL_USER_STAT	Active Flag:					
WC_DOC_NUMBER						
WORK_CENTER	Dula List					
Data Segment	Rule List					

9. From the Low Value drop-down list, choose 5 - Selection Variant as assignment type.

Mobile Application Filter:									
Data Mobile Data Object Detail (Change	Mode)								
*oMD01d: SAM2310_WCM_DOCU *Mobile Application: SAP Service and Asset M *oMD0 Handler: MERP/CL_PM_WCM_D	tanager 2310 OCUMENT_OD : of			Work Clearance Management			Save	X Cancel	
General Setting Technical Model Info Data	Filter Field Selection	Change Detection	Dependent Object	Transaction Settings	Outbound Trigger A	Assignment			
Defined Filters	Rule Editor								
 ✓ Second Second	Operation:	READ		Filter Name:	WC_DOC_ASSIGN	_			
FUNCTIONAL_LOCATION		/MERP/CORE_OMDO_DIST	-	Reference Field Name:	WCM_DOC_ASG	INT_TYPE			
PARTNER_FUNCTION		SAM2310_WCM_DOCUME Static Value in Range Table		SSIGNMENT_TYPE					
FIANNING_PLANT*	Enter Range Va	alue							
WC_DOC_ASSIGNMENT_TYPE*	Sign: Inclusiv	re 🗸 Option:	=	\sim					
WC_DOC_EXCL_SYST_STAT* WC_DOC_EXCL_USER_STAT WC_DOC_INCL_SYST_STAT WC_DOC_INCL_USER_STAT WC_DOC_INCL_USER_STAT WC_DOC_UNDER	Low Value: 5 - Sele High Value: Active Flag: 🗸	ection Variant		~					
WORK_CENTER	Rule List								
Security Standard Filter		le Type Rule Value			Active Flag				
		NGE 1				-			
	00002 RA	ANGE 5			v				

O Note

Consider the following in the Rule List table, Rule Value column:

- If there is only one row with assignment type 5, then only the objects assigned to the user will be downloaded to the client (*Assigned to me* button will not be displayed).
- If there are two rows with assignment types 1 and 5 (see the screenshot above), then all the objects will be donwloaded to the client and the user can filter them with the *Assigned to me* button.

10. Click Save to exit Change Mode.

7.7.3 Assignment Configuration by Assignment Type 6 -Operational List + Selection Variant

Context

To enable the *Assigned to me* filtering option for users by the 6 - *Operational List (Operational list + Selection Variant)* Assignment Type, perform the following steps:

O Note

Regarding the order of steps, it does not matter if you perform the SAP GUI or Configuration Panel changes first.

Procedure

SAP GUI changes

1. To create the Selection Variant, use the WCL4 transaction to open the *List Editing - Display Safety Cerificates* screen.

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ystem Status				
 Created Prepared Untaggable Processing Tagged Untagged Data on Mobile Device Object Deactivated 		Closed Change mode Test cycle Conflict Femporarily Untagged Nork permit printed Deletion Flag		
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2. Select the filters you would like to use and click Save.

3. Enter a name for the Selection Variant and click Save.

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- 4. Enable Mobile Processing for the created Safety Certificate's Usage Type.
- 5. Add the Operational Item to the *Tagging List*.

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Configuration Panel changes

- 6. In the SAP GUI, navigate to the /n/syclo/configpanel transaction to open the configuration panel.
- 7. Under oData Channel Integration Settings, navigate to oData Mobile Data Configuration.

SAP	Mobile Application Integration Framework Configuration	
		Log C
Nobile Application Configuration		
Seneral Info	Obata Channel Integration Settings o Obata Service Assignment Assign standard Obata Service to the mobile application. oData service model will be generated based on configuration setting. o Obata Model Configuration Mobile application oData Model definition for entity type, entity set, association, association set, avaigation property etc. o Obata Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	Change Detection Settings • EFI Assignment Enhancement Pranework Implementation Trigger is assigned to Exchange Objects. • Exchange Object Configuration Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile application.
Transaction Management Setting	RFC Channel Integration Settings • Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data. • BAPI Wrapper Configuration Agentry Integration BAPI Wrappers are assigned to Mobile Data Objects ping	Push Framework Settings Push Scenario Definition Fush scenario can be defined to push data to mobile devices when qualified datasets changed in the backend. © Outbound Trigger Configuration Triggers to interface with external systems are defined. © Subscription Agent Definition Defines how subscription requests for backend system data are handled.
System Configuration		
System Settings a Technical Settings Framework technical settings such as logging level, conversion exit	Security Settings a Mobile Authorization Settings Mobile application specific security settings can be defined for integration framework, mobile application, or class handlers.	

8. From the list of oMDOs, select SAM2310_WCM_DOCUMENT and click Change.

SAP		Mobile Application Integ	gration Framew	ork Configuration				
								Log Off
ConfigPanel Home	Mobile Application Filter:	*		~				
oMDO Id: SAM2310_WCM_DOCUMENT F oData Mobile Data Object by Mobile App v oData Mobile Data Object List	Create Cop		nange		Work Clearage	Management Deserves		۵
SAP SERVICE ASSET_MANAGER_2310	Mobile Application:	SAM2310_WCM_DOCUMENT SAP Service and Asset Manager 2310 /MERP/CL_PM_WCM_DOCUMENT_OD : of		Description: Work Clearance Management Document			n	
	General Setting Defined Filters > Poperation - Filters	Technical Model Info	Data Filter	Field Selection	Change Detection	Dependent Object	Transaction Settings	> ≜

9. Under the *Data Filter* tab, select *WC_DOC_ASSIGNMENT_TYPE* from the list of filters.

SAP		Mobile Application	Integration Framew	ork Configuration		
						Log Off
Mobile Application Filter:						
oData Mobile Data Object Detail (Chang	e Mode)					
						📙 Save 🗶 Cancel 🚹
*oMDO Id: SAM2310_WCM_DOCI	UMENT		* Description:	Work Clearance Management	Document	
* Mobile Application: SAP Service and Asset	Manager 2310					
* oMDO Handler: //MERP/CL_PM_WCM_						
General Setting Technical Model Info Da	ta Filter Field Select	on Change Detection	Dependent Object	Transaction Settings	Outbound Trigger Assignment	
Defined Filters	Rule Editor					
V 🔋 Operation - READ						
✓ □ Data Distribution	Operation:	READ		Filter Name:	WC_DOC_ASSIGNMENT_TYPE	
F EQUIPMENT	Object Name:	/MERP/CORE_OMDO_DIS	TR_STR	Reference Field Name:	WCM_DOC_ASGMNT_TYPE	
FUNCTIONAL_LOCATION	Data Filter Rule Key:	SAM2310_WCM_DOCUME	NT.READ.WC_DOC_AS	SIGNMENT_TYPE		
PARTNER_FUNCTION	Filter Rule Type:	Static Value in Range Table	Format 🗸			
PLANNER_GROUP						
P PRIORITY	Enter Range V	alue				
WC_DOC_ASSIGNMENT_TYPE*	Sign: Inclus	ve 🗸 Option:	=	~		
WC_DOC_EXCL_SYST_STAT*	Low Value: 1 - Us	er Plant		~		
WC_DOC_EXCL_USER_STAT	High Value:			~		
WC_DOC_INCL_SYST_STAT				~		
WC_DOC_INCL_USER_STAT	Active Flag:					
WC_DOC_NUMBER						
WORK_CENTER	Rule List					
Data Segment	INUIO LISU					

10. From the Low Value drop-down list, choose 6 - Operational List (Operational list + Selection Variant) as assignment type.

oData Mobile Data Object Detail (Change	Mode)	
*oMDO Id: SAM2310_WCM_DOCL * Mobile Application: SAP Service and Asset * oMDO Handler: //MERP/CL_PM_WCM_E	Manager 2310	Save 🗙 Cancel 🚺
General Setting Technical Model Info Data F Defined Filters	Filter Field Selection Change Detection Dependent Object Transaction Settings Outbound Trigger Assignment Rule Editor	
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Image: Sequent > □ total Sequent > □ at as Sequent > □ Security > □ Standard Filter	Rule List Rule No. Rule Yalue Active Flag 00001 RANGE 1 Image: Colspan="2">Image: Colspan="2">Image: Colspan="2" Image: Colspan="2">Image: Colspan="2" Image: Colspa="2" Image: Colspan="2" Image: Colspa="" Im	

O Note

Consider the following in the Rule List table, Rule Value column:

- If there is only one row with assignment type 6, then only the objects assigned to the user will be downloaded to the client (*Assigned to me* button will not be displayed).
- If there are two rows with assignment types 1 and 6 (see the screenshot above), then all the objects will be donwloaded to the client and the user can filter them with the *Assigned to me* button.

11. Click Save to exit Change Mode.

7.8 Work Permit Approvals

Context

Safety Technicians can issue approvals on the details screen of a selected Work Permit (see Issuing Work Permit Approvals). To configure this feature for the Safety Technician persona, perform the following steps:

Note

- Regarding the order of steps, it does not matter if you perform the SPRO or Mobile Application parameter (*WCMApprovalRole*) configuration first.
- With the Mobile Application parameter configuration you can check if the user is authorized to do **any** approvals.

With the SPRO configuration you can check if the user is authorized to do a **specific** approval.

Procedure

Configuration Panel changes

- 1. In the SAP GUI, navigate to the /n/syclo/configpanel transaction to open the Configuration Panel.
- 2. Under General Info, navigate to Mobile Application Configuration.

SAP	Mobile Application Integration Framework Configuration	
NAME AND ADDRESS OF A DOCUMENT		Log O
lobile Application Configuration		
Peneral Info Noble Application Configuration Mobile Applications, such as release, description Component Assignments or Component Assignment for user persona, features etc. Peospatial Framework Settings Coespatial Service Definitions	OData Channel Integration Settings oData Service Assignment Assign shardned oblas Service to the mobile application. oData service model will be generated based on configuration setting o obtat Model Configuration Mobile application oData Model definition for entity type, entity set, association, association set, mavigation property etc. o Obtat Model Data Chylect Configuration	Change Detection Settings • EFI Assignment Enhancement Pramework Implementation Trigger is assigned to Exchange Objects. • Exchange Object Configuration Change detection rules for SAP data objects such as master data, transaction data can be defined for each mobile application.
Pefine Geospatial Service Provider Information, Object Type Assignment etc.	Data extraction and distribution logic and rules are defined for configuration, master and transaction data.	
Tansaction Management Setting > Inbound Transaction Queue Definition effer Inbound Transaction Queue Settings bata Staging Settings 20 Data Agent Definition effere data store supplying agent settings. D Data Store Definition effere staging data store settings, data storage, data agent assignment, schedule, mappi formation etc.	REC Channel Integration Settings Mobile Data Object Configuration Data extraction and distribution logic and rules are defined for configuration, master and transaction data. BAP Wrapper Configuration BAP Wrapper Configuration BAP Wrapper Configuration Baptry Integration BAPI Wrappers are assigned to Mobile Data Objects	Push Framework Settings • • Push Scenario Definition • • Bush Scenario Definition • • Bush Scenario Definition • • Jush scenario Settinger Configuration • • Outbould Trager Configuration • • Subscription Agent Definition • • Subscription Agent Definition • Defines how subscription requests for backend system data are handled.
ystem Configuration		
System Settlings Technical Settlings ramework technical settlings such as logging level, conversion exit	Security Settings a Mobile Authorization Settings Mobile application specific security settings can be defined for integration framework, mobile application, or class handlers.	

3. Select the application from the list, go to Parameters tab and click the WCMApprovalRole parameter.

7		Woo	le Application Integration Fr	anonon comiguiation					
on them have been the 1 h									
figPanel Home									
ed Mobile Applications 🛛 😞 Mo	obile Application (Dis	splay Mode)							
	🗋 Create 🛛 👔 Copy	y 📋 Delete 🖉 Change							
an and assess of	General Mob	oile Status Setting Conversion Exit Setti	ng System Components	Parameters Client Glob	als User Attributes Ap	plication Persor	na Features	Sync G	Groups
an out annual of	Mobile Applicat	ion Info							
		SAP_SERVICE_ASSET_MANAGER_23	Deleses	2310					
		SAP_SERVICE_ASSE1_MANAGER_23 SAP Service and Asset Manager 2310	Release:	2310					
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SAP_SERVICE_ASSET_MANAGER_2310	Import/Export RecNo 0000000159	Parameter Gro F Param. Name USER_AUTHORI Enable.MD.Create		Y	Y	Scope User	0000000000	V	
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	Import/Export RecNo 000000159 000000160 000000161 000000162 000000163 000000164 000000165	Parameter Gro Param. Name USER, AUTHORI Enable MD Create USER, AUTHORI Enable NO Create USER, AUTHORI Enable NO Edit USER, AUTHORI Enable SNO Create	e le	Y Y Y Y Y Y	Y	Scope User User User User User User User	0000000000 000000000 000000000 00000000	 > ><	

O Note

The WCMApprovalRole parameter checks if the specific authorization object is assigned to the user.

- 4. Under Parameter Detail:
 - The AUTH_OBJ is I_SOGEN by default.
 - Check if the SWERK and PMSOG fields have any values.
 - This parameter returns 'Y' as Parameter Value if the authorization object is assigned to the user and 'N' if it is not.

	UBER_AUTORIZATIONS
Param. Name: Param. Value:	
Rule Id:	Construction of the second secon
AUTH_OBJ: 1	
FIELD1:	
VALUE1:	
FIELD2: F	
VALUE2:	
FIELD3:	
VALUE3:	
FIELD4:	
VALUE4:	
FIELD5:	
VALUE5:	
FIELD6:	
VALUE6:	
FIELD7:	
VALUE7:	
FIELD8:	
VALUE8:	
FIELD9:	
VALUE9:	
FIELDO:	
VALUE0:	
Dependent Parameter Id:	v
endent Parameter Group:	
endent Parameter Name:	
endent Parameter Value:	
Comment	
Active Flag: No Runtime Change:	

SPRO changes in SAP GUI

5. In SAP GUI, use the transaction code SPRO and go to SAP Reference IMG > Plant Maintenance and Customer Service > Work Clearence Management > Approvals > Assign Processor for Approval Workflow.

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Structure		
>	Governance, Risk and Compliance	
> 🚱	Logistics Execution	
>	SCM Extended Warehouse Management	
>	Quality Management	
\sim	Plant Maintenance and Customer Service	
> 🛃	Master Data in Plant Maintenance and Customer Service	
> 🛃	Maintenance Plans, Work Centers, Task Lists and PRTs	
> 🛃	Maintenance and Service Processing	
> 🛃	Information Systems for Plant Maintenance and Customer Service	
>	Maintenance Roles	
>	System Enhancements and Data Transfer	
\sim	Work Clearance Management	
>	Master Data	
\sim	Approvals	
_	> Standard	
	> Enhancements	
	🙆 😳 Activate Work Clearance Management for Maintenance Orders	
	🙆 😳 Define Approval Groups	
	🕼 🗇 Assign Processor for Approval Workflow	
	🙆 😳 Assign Approvals Based on Usage	
>	Lockout/Tagout	
> 🛃	Customer Service	
> 🛃	Production	
> 🛃	Production Planning for Process Industries	

- 6. In this SPRO setting, you can assign a user to each plant or approval combination.
- 7. Assign the SAP user ID of the user in the *Processor* field.

PIPI Typ Typ Description of WCM Object	Permit	Permit Text	Processor	(
1000 WA 1 Work Permit	ACTIVE	Activated by CCR Operator	KE	
1000 WA 1 Work Permit	APPROVED	Approved!	KE	
1000 WA 1 Work Permit	HSE FUNC	HSE Function	CH	
1000 WA 1 Work Permit	OPER_SUPER	Area / Operation Supervisor	СН	
1000 WA 1 Work Permit	SEN APP	Senior Approver	СН	
1000 WA 1 Work Permit	SJA	SJA is Carried Out	SE	
1000 WA 1 Work Permit	TAGGED	Tagging Exec.!	KE	
1000 WD 0 Safety Certificate	BTG	Tag	KE	
1000 WD 0 Safety Certificate	ETG	Tagged	KE	
3000 WA 1 WC Application	ACTIVE	Activated by CCR Operator	KE	
3000 WA 1 WC Application	APPROVED	Approved!	KE	
3000 WA 1 WC Application	HSE_FUNC	HSE Function		
3000 WA 1 WC Application	OPER_SUPER	Area / Operation Supervisor		
3000 WA 1 WC Application	SEN_APP	Senior Approver		
3000 WA 1 WC Application	SJA	SJA is Carried Out		
3000 WA 1 WC Application	TAGGED	Tagging Exec.!		
3000 WD 0 Operational WCD	BTG	Tag	KE	
3000 WD 0 Operational WCD	ETG	Tagged	KE	<

(i) Note

This field is a free text field, there is no validation for the SAP user ID. Please make sure you enter the ID correctly.

8 Field Service Technician Configuration on a Customer Service Back End

The Field Service Management solution connects and enables operations while simplifying and automating processes, helping to accelerate execution, improve the productivity of service teams, and control costs.

Using the Field Service Management solution, field service leaders and managers can make decisions based on real-time insights, gain visibility of field service operations, and take advantage of analytical dashboards.

Field service technicians using the SAP Service and Asset Manager app get assignment information in advance, so they are better prepared. Flexible mobile tools, including guided procedures and checklists help solve issues on the first visit while reducing time spent on administrative tasks. While on-site, technicians can collect relevant information about the assignment, get customer signatures, and sync information and back office processes quickly.

8.1 SAP Service and Asset Manager Integration with Field Service Management Scheduling

Field Service Management planning board administrators can use geolocation information from the mobile app to enable scheduling and dispatching based on the location of the technician.

Supported Scenarios

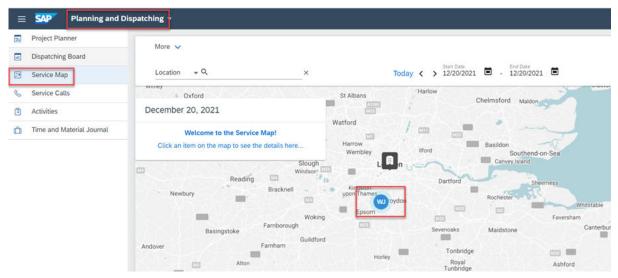
The following scenarios are supported for the integration of SAP Service and Asset Manager with Field Service Management Scheduling:

- Status updates: Status updates from SAP Service and Asset Manager are propagated to the Field Service Management Planning and Dispatching Tool. Since Field Service Management supports only activity level assignments, status transition is only supported for the Assignment Type 2 – Operation Level Assignment to Personnel Number. Only statuses assigned to the Field Service Management service workflow statuses are propagated to Field Service Management.
- Technician Location Tracking: The location of the technician captured from SAP Service and Asset Manager is updated to Field Service Management so that it can be viewed in the Field Service Management service map.
- Reject Operation: If a technician rejects an operation, the corresponding activity in Field Service Management is unassigned.
- Transfer Operation: If a technician transfers an operation from one technician to another, the corresponding activity in Field Service Management is reassigned from one technician to another.

Employee Location Update

- The employee location is captured in SAP Service and Asset Manager, and the location can be updated into Field Service Management.
- The mobile status changes from SAP Service and Asset Manager can be updated into the Field Service Management.

The location updates from the client can be viewed under the Field Service Management Map, Planning and Dispatch Service Map .



8.1.1 Prerequisites for Configuring Field Service Management

It is assumed that the Proaxia Field Service Management connector is configured and set up to replicate the data between the SAP back end and the SAP Field Service Management system.

SAP Service and Asset Manager integration with Field Service Management requires that the following scenarios are configured and enabled within the Proaxia Field Service Management connector:

- **Employees:** Replicate employees (SAP HR Personnel numbers) from SAP ECC to Field Service Management as Persons. Use transaction *PA30* to configure *Infotype 0105/001* to map the user name to the user's personnel number replicated in Field Service Management.
- Materials: Replicate *Materials* in the back end as *Items* to Field Service Management. Items are needed to create equipment.
- Equipment / Functional Locations: Replicate Equipment and/or Functional Location to Field Service Management as Equipment. Equipment are technical objects assigned to service orders
- **Customers:** Replicate *Customers* to Field Service Management as *Business Partners*. Business partners are assigned to service orders.
- **Business Partners (Optional):** Replicate *Business Partners* to Field Service Management if they're needed in the customer scenario as part of order processing.
- Orders: Replicate Service Orders, Work Orders, and Operations to Field Service Management.
- Assignments (Field Service Management): Replicate Assignments from the Field Service Management system to the back end.

8.1.2 Integration of SAP Service and Asset Manager with Field Service Management Using the Proaxia Field Service Management Connector

To execute the supported integration scenarios between SAP Service and Asset Manager and Field Service Management, SAP Service and Asset Manager integrates directly with Field Service Management using the Service and Data APIs provided by Field Service Management. However, the underlying objects that need to be updated (service orders (service calls in Field Service Management), operations (activities in Field Service Management), employees (persons in Field Service Management)), are created by the Proaxia connector.

Therefore, you must implement the following prerequisites for the end-to-end scenarios to work:

- Switching on Sending externalID from the Proaxia Field Service Management Connector to the Field Service Management Solution [page 293]
- Implement BADI Methods [page 294]

8.1.2.1 Switching on Sending externalID from the Proaxia Field Service Management Connector to the Field Service Management Solution

Context

O Note

Perform these changes within the configuration of the Proaxia Field Service Management connector.

Procedure

Switch on the sending of the *externalld* from the Field Service Management connector to Field Service Management as shown in the following screenshots:

 Petition (Construction)

 PERFORM

 PERFORM

 PERFORM

 PERFORM

 PARAGENT

 PARAGENT



8.1.2.2 Implement BADI Methods

Context

Depending on the integration framework used, implement the */MERP/CA_FSM_CROSSREF_BADI* BADI. The methods in the BADI must return the cross-referencing information between the back end object ID and the Field Service Management object ID.

Procedure

1. Implement the local method to determine the company ID, required for the *GET_EMPLOYEE_IDS BADI* method.

```
METHOD get_compid.
DATA: lv_string1 TYPE string,
    lv_string2 TYPE string,
    lv_account TYPE string,
    lv_fsmaccount TYPE /pacg/ecm_cloudaccount,
    lv_fsmcompany TYPE /pacg/ecm_cloudid,
    lv_compid TYPE /pacg/ecm_compid,
    ls_cacc TYPE /pacg/ecm_cacc.
lv_account = iv_account.
SPLIT lv_account AT '&account=' INTO lv_string1 lv_string2.
SPLIT lv_string2 AT '&company=' INTO lv_string1 lv_string2.
lv_fsmaccount = lv_string1.
lv_fsmcompany = lv_string2.
```

ls_cacc = /pacg/ecm_cl_d_access=>get_cloudcomp_definition(

```
iv_cloudaccount = lv_fsmaccount
iv_cloudid = lv_fsmcompany ).
rv_compid = ls_cacc-compid.
ENDMETHOD
```

2. Implement the method / MERP/IF_CA_FSM_CROSSREF_BADI~GET_EMPLOYEE_IDS:

This method is a prerequisite for saving geolocations captured from SAP Service and Asset Manager to the Field Service Management planning and scheduling board.

The method must return the Field Service Management internal employee ID(s) (*Field* id of the Field Service Management *Person* entity) based on the personnel number(s) provided.

Use the importing parameter *IO_ACI_SERVICE* to execute a service call to Field Service Management for retrieving the *id* based on the code in the following code example.

O Note

For simplicity, it is assumed that only a single personnel number is passed as a parameter. Adjust the code accordingly to handle multiple parameters. The following code is an example. You may need to make additional adjustments for your environment.

```
METHOD /merp/if_ca_fsm_crossref_badi~get_employee_ids.
    TYPES: BEGIN OF ty_error,
                error TYPE string,
              END OF ty_error.
    TYPES: BEGIN OF ty_fsmitem,
                id
                              TYPE string,
                externalid TYPE string,
                username TYPE string,
             END OF ty_fsmitem.
    TYPES: BEGIN OF ty_persondata,
               person TYPE ty_fsmitem,
              END OF ty_persondata.
    DATA:
       lv_pernr_query TYPE string,
       ls_oblnk TYPE /smfnd/sync_d_oblnk_h_upd_str,
lv_id TYPE /smfnd/sync_object_key_dte,
       lv url
                         TYPE string,
       lv_char_code TYPE n LENGTH 3,
       It_persondataTYPE II LENGIN 3,lt_persondataTYPE STANDARD TABLE OF ty_persondata,ls_persondataLIKE LINE OF lt_persondata,lt_errorTYPE STANDARD TABLE OF ty_error,ls_errorLIKE LINE OF lt_error,
       lv_status_code TYPE i,
       lv_reason TYPE string,
lv_result TYPE string,
       lv_raw_data TYPE xstring,
lv_compid TYPE /pacg/ecm_compid,
       lv_cloud_uname TYPE /pacg/ecm_cloud_uname,
       ls_pernr
                        LIKE LINE OF it_pernr.
    TYPES: BEGIN OF ty_personresp,
                data LIKE lt_persondata,
              END OF ty_personresp.
    DATA: ls_personresp TYPE ty_personresp.
    IF io_aci_service IS BOUND.
```

```
IF it_pernr IS INITIAL.
        RETURN.
      ENDIF.
      lv_compid = get_compid( iv_account ).
      LOOP AT it_pernr INTO ls_pernr.
        CLEAR lv_pernr_query.
        IF ls_pernr-low IS NOT INITIAL.
          TRY.
               lv_cloud_uname = /pacg/
ecm_cl_x_util=>build_cloud_uname( iv_pernr
                                               = ls_pernr-low
                                                                            iv_comp
        = lv_compid ).
id
            CATCH /pacg/ecm_cx_main.
               "No FSM user exists
               CONTINUE.
          ENDTRY.
          CONCATENATE lv_pernr_query 'externalId="' ls_pernr-
low '"' INTO lv_pernr_query.
        ENDIF.
        IF lv_pernr_query IS NOT INITIAL.
CONCATENATE '/api/data/v4/Person?
dtos=Person.24' '&query=' lv_pernr_query
                      '&fields=id,externalId,userName' iv_account INTO lv_url.
          CALL METHOD io_aci_service->call_service
             EXPORTING
               iv_request_uri = lv_url
               iv_request_method = 'GET'
               it_headers
                                 = it_headers
             IMPORTING
               ev_status_code = lv_status_code
               ev_reason
                                 = lv_reason
               ev_result
                                  = lv_result
                                  = lv_raw_data.
               ev_raw_data
          lv_char_code = lv_status_code.
          IF lv_char_code CP '4*'.
            ls_error-error = lv_result.
            APPEND ls_error TO lt_error.
          ELSE.
            /aci/
cl_util_json_handler=>deserialize( EXPORTING json = lv_result
                                                         CHANGING data = ls_pers
onresp ).
            LOOP AT ls_personresp-data INTO ls_persondata.
               lv_id = ls_persondata-person-id.
              ls_oblnk-object_type = 'EMPLOYEE'.
ls_oblnk-object_key = ls_pernr-low.
               ls_oblnk-ext_object_type = 'PERSON'.
ls_oblnk-ext_object_key = lv_id.
               ls_oblnk-sys_comp = 'SAM_FSM'.
               ls_oblnk-mobile_app = iv_mapp.
               APPEND ls_oblnk TO et_oblnk.
              CLEAR ls_oblnk.
            ENDLOOP.
          ENDIF.
        ENDIF.
      ENDLOOP.
    ENDIF.
  ENDMETHOD.
```

3. Implement the method /MERP/IF_CA_FSM_CROSSREF_BADI~GET_ACTIVITY_ID:

This method is a prerequisite for implementing the relevant status updates from SAP Service and Asset Manager to the Field Service Management planning and scheduling board. This method must return the Field Service Management internal activity ID (the id field of the Field Service Management *Activity* entity) based on the order and operation number provided.

Use the importing parameter *IO_ACI_SERVICE* to execute a service call to Field Service Management for retrieving the ID based on the code. See the following code example for more details.

(i) Note

The following code is an example. You may need to make additional adjustments for your environment.

```
METHOD /merp/if_ca_fsm_crossref_badi~get_activity_id.
    TYPES: BEGIN OF ty_fsmitem,
                            TYPE string,
               id
               externalid TYPE string,
             END OF ty_fsmitem.
    TYPES: BEGIN OF ty_error,
               error TYPE string,
             END OF ty_error.
    TYPES: BEGIN OF ty_actdata,
              activity TYPE ty_fsmitem,
            END OF ty_actdata.
    DATA:
       lv_act_query TYPE string,
                       TYPE /smfnd/sync_object_key_dte,
       lv_id
                       TYPE string,
       lv_url
      Iv_uriIIIE Sciling,lv_char_codeTYPE n LENGTH 3,lt_actnrTYPE STANDARD TABLE OF /pacg/ecm_actnr,lv_actnrTYPE /pacg/ecm_actnr,
       lv_object_key TYPE /smfnd/sync_object_key_dte,
lt_error TYPE STANDARD TABLE OF ty_error,
      lt_errorTYPE STANDARD TABLE OFls_errorLIKE LINE OF lt_error,
      lt_actdata TYPE STANDARD TABLE OF ty_actdata,
ls_actdata LIKE LINE OF lt_actdata,
       lv_status_code TYPE i,
      lv_reason
                        TYPE string,
       lv_result
                       TYPE string,
                       TYPE xstring,
       lv_raw_data
       lv_aufnr_len TYPE i,
       lo_descr
                        TYPE REF TO cl_abap_elemdescr,
       ls_aufnr_dfies TYPE dfies.
    TYPES: BEGIN OF ty_actresp,
data LIKE lt_actdata,
             END OF ty_actresp.
    DATA: ls_actresp TYPE ty_actresp.
    IF io_aci_service IS BOUND.
       IF iv_aufnr IS INITIAL OR iv_vornr IS INITIAL.
        RETURN.
       ENDIF.
       lv_object_key = iv_aufnr.
       lo_descr ?= cl_abap_elemdescr=>describe_by_data( iv_aufnr ).
       ls_aufnr_dfies = lo_descr->get_ddic_field( ).
       lv_aufnr_len = ls_aufnr_dfies-leng.
       lv_object_key+lv_aufnr_len = iv_vornr.
       "Get all activitties for order operation
```

```
SELECT actnr INTO TABLE lt_actnr FROM /pacg/
ecm_acti WHERE aufnr = iv_aufnr AND vornr = iv_vornr.
      "Get the newest activity
      SORT lt_actnr DESCENDING.
      READ TABLE lt_actnr INTO lv_actnr INDEX 1.
      IF sy-subrc IS NOT INITIAL.
       RETURN.
      ENDIF.
      CONCATENATE lv_act_query 'externalId="' lv_actnr '"' INTO lv_act_query.
      IF lv_actnr IS NOT INITIAL.
        CONCATENATE '/api/data/v4/Activity?
dtos=Activity.39' '&query=' lv_act_query '&fields=id,externalId' iv_account IN
TO lv url.
        CALL METHOD io_aci_service->call_service
          EXPORTING
            iv_request_uri = lv_url
            iv_request_method = 'GET'
            it headers
                        = it_headers
          IMPORTING
            PORTING
ev_status_code
                               = lv_status_code
            ev_reason = lv_reason
ev_result = lv_result
                              = lv_reason
            ev_raw_data
                              = lv_raw_data.
        lv_char_code = lv_status_code.
        IF lv_char_code CP '4*'.
          ls_error-error = lv_result.
          APPEND ls_error TO lt_error.
        ELSE.
          /aci/
cl_util_json_handler=>deserialize( EXPORTING json = lv_result
                                                     CHANGING data = ls_actres
p).
          LOOP AT ls_actresp-data INTO ls_actdata.
            lv_id = ls_actdata-activity-id.
            es_oblnk-object_type = 'OPERATION'.
            es_oblnk-object_key = lv_object_key.
es_oblnk-ext_object_type = 'ACTIVITY'.
            es_oblnk-ext_object_key = lv_id.
            es_oblnk-sys_comp = 'SAM_FSM'
            es_oblnk-mobile_app = iv_mapp.
      ev_id = ls_actdata-activity-id.
            EXIT.
          ENDLOOP.
        ENDIF.
      ENDIF.
    ENDIF.
  ENDMETHOD.
```

4. Implement the method /MERP/IF_CA_FSM_CROSSREF_BADI~GET_SERV_ASSIGN_ID:

This method is a prerequisite for implementing relevant status updates from SAP Service and Asset Manager to the Field Service Management planning and scheduling board. The method must return the Field Service Management internal activity ID (the id field of the Field Service Management *Activity* entry) based on the order and operation number provided.

Use the *QUERY_FSM_SERVICEASSIGN* method from the */MERP/CL_CA_FSM_INTEGRATION* class to get this value based on the following code example.

③ Note

The following code is an example. You may need to make additional adjustments for your environment.

```
METHOD /merp/if_ca_fsm_crossref_badi~get_serv_assign_id.
    DATA lref_fsm_integration TYPE REF TO /merp/cl_ca_fsm_integration.
    TRY.
        " Create FSM object
        CREATE OBJECT lref_fsm_integration
          EXPORTING
            iv_mapp = iv_mapp.
      CATCH /merp/cx_core_exception_gen INTO DATA(lref_badi_exception).
        RETURN.
    ENDTRY.
    ' Fetch Service Assignment from FSM if it exists
    lref_fsm_integration->query_fsm_serviceassign(
      EXPORTING
        iv_aufnr
                       = iv_aufnr
                       = iv_vornr
        iv vornr
        iv_activity_id = iv_activity_id
      TMPORTING
        ev_id
                       = ev_id
        ev_activity_id = ev_activity_id
        es_oblnk
                      = es_oblnk
        ).
  ENDMETHOD.
```

5. Implement the /MERP/IF_CA_FSM_CROSSREF_BADI~GET_SERV_ASSIGN_STATUS_ID:

This method is a prerequisite for implementing relevant status updates from SAP Service and Asset Manager to the Field Service Management planning and scheduling board. The method must return the Field Service Management internal activity ID (the id field of the Field Service Management *Activity* entry) based on the order and operation number provided.

Use the *QUERY_FSM_SERVICEASSIGNSTATUS* method from the */MERP/CL_CA_FSM_INTEGRATION* class to get this value based on the following code example.

Note

The following code is an example. You may need to make additional adjustments for your environment.

```
METHOD /merp/if_ca_fsm_crossref_badi~get_serv_assign_status_id.
   DATA lref_fsm_integration TYPE REF TO /merp/cl_ca_fsm_integration.
    TRY.
        " Create FSM object
        CREATE OBJECT lref_fsm_integration
         EXPORTING
            iv_mapp = iv_mapp.
      CATCH /merp/cx_core_exception_gen INTO DATA(lref_badi_exception).
        RETURN.
    ENDTRY.
    lref_fsm_integration->query_fsm_serviceassignstatus(
        EXPORTING
          iv_aufnr
                        = iv_aufnr
          iv_vornr
                        = iv_vornr
          iv_activity_id = iv_activity_id
        IMPORTING
         ev_id
                        = ev_id
          es_oblnk
                     = es_oblnk
          ).
```

ENDMETHOD.

6. Implement the BADI method *IS_VALID_ORDER_FOR_REPLICATION* from the BADI / *MERP*/ *CA_FSM_CROSSREF*.

This method must return a *TRUE* (X) value if the supplied order ID or order type is valid for replication to Field Service Management. The status changes on the operation (activity in Field Service Management) are replicated to the Field Service Management Scheduling and Dispatching board only if a *TRUE* value is returned by the method.

If this method isn't implemented, by default no replication of status occurs from SAP Service and Asset Manager to Field Service Management

8.1.3 Configuring Connectivity between SAP Service and Asset Manager and Field Service Management

Context

The following configuration is needed to establish a connectivity between SAP Service and Asset Manager and Field Service Management. For information on announcing root certificate change, refer to Announcing Root Certificate Change.

Procedure

- 1. Create a client in Field Service Management:
 - a. Log on to your Field Service Management administrative URL.
 - b. Create a new client with the following parameters:
 - Client Authentication Method: CLIENT_SECRET
 - User Groups: Admin
 - c. Save the *Client ID* and *Client Secret*.

2. Configure STRUST in the back end:

a. Download the *ISRG Root X1* certificate. See the Announcing Root Certificate Change topic for more details.

O Note

The .pem file can be downloaded.

b. Install the ISRG Root X1 certificate against the SSL Client (Anonymous) in the Trust Manager.

3. Create RFC destinations in the back end:

a. Create a destination for establishing the oAuth connection between the back end and Field Service Management with the following parameters:

- Name: SAM2310_FSM_OAUTH
- **Connection Type:** G (HTTP Connection to External Server)
- Technical Settings
 - Target Host: auth.coresuite.com
 - Path Prefix: /api/oauth2/v1/token
- Logon and Security
 - 1. Select Basic Authentication
 - 2. Under *User and Password* enter the client ID and client secret from *Step 1*.
 - 3. Under Security Options specify the following:
 - SSL: Active
 - SSL Certificate: ANONYM SSL Client (Anonymous)
- b. Create a destination for implementing the API calls to Field Service Management with the following parameters:
 - Name: SAM2310_FSM_API
 - **Connection Type:** G (HTTP Connection to External Server)
 - Technical Settings
 - Target Host: <cluster e.g. us/eu>.coresuite.com
 - Logon and Security
 - 1. Select *Do not use a user*.
 - 2. Under Security Options, specify the following:
 - SSL: Active
 - SSL Certificate: ANONYM SSL Client (Anonymous)

8.1.4 Configuring Server Parameters

Procedure

- 1. Log on to the *Administration and Monitoring Portal* in the backend using transaction /SYCLO/ADMIN. Under the *Administration* tab, select Server Management.
- 2. Create a new server with the name SAM_FSM for the application SAP_SERVICE_ASSET_MANAGER_<version>.

✓ Basic Search Paral	neters			
* Mobile Application: SAP	Service and Asset Manager 2205 $$ $$ $$			
Server Name: SAM	1_FSM	Server Port: 00000		Q Search
Serial No:				
Search Result				
fiew: [Standard View]	V Print Version Export V		0	
Server Name Port S	erial No. Mobile App	Lock Flag Disable Outb. Trigger	Created On	
 SAM_FSM 7003 S 	CP SAP_SERVICE_ASSET_MANAGER_2	205	22.12.2021 16:00:13	Create
Middleware Server D Change Basic Info Additio	etail (Display Mode) nal Properties			
Mobile Appli	ation: SAP Service and Asset Manager 2205		* Server GUID:	
* Server	Name: SAM_FSM		* Port:	
* Middleware Svr S	SerNo: SCP			
Server URL (F	QDN):			
Targe	t Host:			
Ten	ant Id:			
System Comp	opent: SAM FSM			

3. Under Server Properties maintain the following properties:

Property Group	Property Name	Property Value
AUTHENTICATION	RFC_OAUTH	Name of the RFC in <i>Step 3.1</i> of the Configuring Connectivity between SAP Service and Asset Manager and Field Service Management [page 300] pro- cedure
AUTHENTICATION	RFC_API	Name of the RFC in <i>Step 3.2</i> of the Configuring Connectivity between SAP Service and Asset Manager and Field Service Management [page 300] pro- cedure
HEADERPARAM	ACCOUNT	Field Service Management Account Name
HEADERPARAM	ACCOUNT_ID	Field Service Management Account ID
HEADERPARAM	COMPANY	Field Service Management Company Name
HEADERPARAM	COMPANY_ID	Field Service Management Company ID
HEADERPARAM	CLIENT_ID	Client ID to send to Field Service Man- agement (e.g: SYSid.Client)
HEADERPARAM	CLIENT_VERSION	1.0

✓ Bas	sic Search Pa	rameters		
	le Application:	SAP Service and Asset Manager 2205 SAM_FSM	Server Port: 00000	Q <u>S</u> earch
Search	Result			
View: [Sta	andard View]	✓ Print Version Export ✓	0	
Serv SAM	er Name Port	Serial No. Mobile App SAP_SERVICE_ASSET_MAN	Lock Flag Disable Outb. Trigger Created On IAGER_2205	Create
2 <u>C</u> h	ange	Detail (Display Mode)		
	perty List			
	Property Group	Property Name	Property Value	
0	AUTHENTICAT	ON RFC_OAUTH	Contract of the second s	
0	HEADERPARAM	ACCOUNT		
0	HEADERPARAM	ACCOUNT_ID		
0	HEADERPARAM	CLIENT_ID		
0	HEADERPARAM	CLIENT_VERSION		

(i) Note

The following additional server parameters can be defined if needed but they are optional. Their default values are also specified below. Changing these values may result in the need for customers to customize their backend integration code.

Property Group	Property Name	Property Value	Description
AUTHENTICATION	AUTH_TYPE	OAUTH	Authentication type used to communicate with Field Service Management – De- fault is OAUTH.
DTO	STATUSDEF	ServiceAssignmentStatus- Definition.9	Field Service Management Data Transfer Object (DTO)
	ITEM	Item.23	 version. Can be changed if a newer version of a DTO is
	EQUIPMENT	Equipment.23	needed.
	BUSINESSPARTNER	BusinessPartner.23	_
	ADDRESS	Address.21	_
	PERSON	Person.24	_
	SERVICEASSIGN	ServiceAssignment.28	_
	SERVICECALL	ServiceCall.26	
	ACTIVITY	Activity.39	_

Property Group	Property Name	Property Value	Description
	SERVICEASSIGNSTATUS	ServiceAssignmentStatus.15	
INTEGRATION	CREATEPERSON	admin	User for creating new objects in Field Service Management (related to SAP Service and Asset Manager only)
UI_URL_PATH	ADDRESS	/api/data/v4/Address	URI strings for the Field Serv-
	EQUIPMENT	/api/data/v4/Equipment	[–] ice Management api call
	ITEM	/api/data/v4/Item	-
	PERSON	/api/data/v4/Person	-
	BUSINESSPARTNER	/api/data/v4/BusinessPart- ner	-
	SERVICEASSIGN	/api/data/v4/ServiceAs- signment	-
	QUERY	/api/query/v1	-
	SERVICEASSIGNSTATUS	/api/data/v4/ServiceAs- signmentStatus	-
	SERVICECALL	/api/data/v4/ServiceCall	_
	SERVICEORDERCREATE	/service-manage- ment/api/v2/composite- tree/service-calls?autoCrea- teActivity=false	-
	ACTIVITY	/api/data/v4/Activity	-

4. Save your changes.

8.1.5 Configuring the Field Service Management Personas

Prerequisites

Ensure the *FIELD_SERVICE_TECHNICIAN* persona is added and activated in the Administration and Monitoring Portal.

For detailed information about personas and how they work, see the Configuring Personas and Features Overview [page 83] topic and subtopics.

Context

Use the following procedure to enable the *FSM_SCHED_INTEGRATION* and *CA_LOCATION_UPDATE* features. They are disabled by default.

Procedure

- From the ConfigPanel home screen, navigate to Component Assignments Select Mobile Application
 User Personas tab . You can then filter for only the FIELD_SERVICE_TECHNICIAN user persona, if desired.
- 2. Click the *Change* button.
- 3. Check the Active Flag for CA_LOCATION_UPDATE and FSM_SCHED_INTEGRATION.

 Apply Filte 	ers					
	User Persona:	~			App. Feature Id:	~
eature Assign	ment					
Display Option \	7					
	User Persona	App. Feature Id	In-Scope	Active Flag		
FIELD	_SERVICE_TECHNICIAN	CA GIS ADD EDIT	0			
		CA_LOCATION_UPDATE				
		EAM_CHECKLIST				
		EAM_PHASE_MODEL				
D .		FOW_ROUTE				
C		FSM_SCHED_INTEGRATION	2			
		HR_TIMESHEET				
		IAM_CHECKLIST				
		IAM_INDICATORS				
		ISU_METER_MANAGEMENT				
C		MM_GOODS_ISSUE				
		MM_GOODS_RECEIPT				
		MM_PHYSICAL_INVENTORY				
		MM_STOCK_TRANSFER				
		PM_ASSEMBLY				

4. Save your changes.

8.1.6 Status Configuration

The only assignment type supported for the Field Service Management solution is *Assignment Type 2*. Therefore, status changes are only supported at the operation level.

The following table shows the default SAP Service and Asset Manager statuses supported for the Field Service Technician persona as defined in the *Mobile Status Settings Configuration* on the ConfigPanel:

Object Type	Mobile Status	Initial Status (Y/N)	Status Attribute 1 (FSM sta- tus)
WO_OPERATION	RECEIVED	Y	new
WO_OPERATION	ACCEPTED		accept

Object Type		Mobile Sta	tus	Initia	al Status (Y/N)	Sta tus	atus Attril s)	oute 1 (FS	SM sta-
WO_OPERATION		REJECTED								
WO_OPERATION		TRAVEL					tra	vel		
WO_OPERATION		ONSITE								
WO_OPERATION		STARTED					WO	ork		
WO_OPERATION		HOLD								
WO_OPERATION		COMPLETE	ED				clo	se		
WO_OPERATION		TRANSFER	2	No s	tatus upda	te				
General Mobile St	atus Setting n Info	Conversion Exit S	etting System	Components	Parameters	Client Gl	obals Us	er Attributes	Application	n Persona
Mobile Application: S	AP_SERVICE_A	SSET_MANAGER_	2205 R	elease: 2205						
Mobile App. Desc.: S	AP Service and	Asset Manager 220)5							
Mobile Status Ma	pping									
Mobile Status List										
Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status	Status Profile	User Status	Initial Status	Skip Update	Disabled	
	ACCEPTED	ACCEPT								
O WO_OPERATION	COMPLETED	R140							~	
O WO_OPERATION	COMPLETED	CLOSE								
	HOLD	R135	•							
	HOLD									
O WO_OPERATION	ONSITE									
Mobile Status D	octorea e									

If any additional SAP Service and Asset Manager statuses are used or a custom service workflow is used in Field Service Management – the additional statuses can be configured in the Mobile Application Mobile Status Settings Configuration . In this case, customization may be needed at the backend and/or MDK level depending on how the statuses need to be used.

The default status transitions are defined in the SAM2310_OVERALL_STATUS oMDO,

MOBILE_STATUS_STATE_MACHINE filter. If additional status transitions are needed or existing ones need to be changed, then the filter values in this oMDO need to be changed. In this case, customization may be needed at the backend and/or MDK level depending on how the status transitions work.

oMDO Id:	SAM2205_OVERALL_	STATUS	Desc	iption: Overall Status Mapping				
Mobile Application: SAP Service and As oMDO Handler: //MERP/CL_PM_OV		t Manager 2205						
			Change Detection Dependent C	bject Transaction Settings Outbound	Trigger Assignment			
efined Filters	† *	Table Rule Editor						
 Operation - READ Standard Filter 		Operation: RE	AD	Filter Name: MOBILE_STATUS_STATE_M	MACHINE			
		Reference Table Name: //M	Reference Table Name: //MERP/PM_MBLSTAT_STATMACH					
V EXCL_MOBILE_		Rule Category: St	atic Table Rules 🗸 🗸					
MOBILE_STATUS_STATE_MACHINE* Ø NOTIFICATION_TYPE* Ø ORDER_TYPE* Ø OVERALL_STATUS_PROFILE			ROLE_TYPE: Technician					
			USER_PERSONA: MAINTENANO	E TECHNICIAN				
			FROM_STATUS: NOTIFICATION		_			
			TO_STATUS: NOTIFICATION: STARTED					
			IS_MANDATORY: False					
			FLAG_DISABLED: Inactive					
		Rule List						
		ROLE_TYPE	USER_PERSONA	FROM_STATUS	TO_STATUS	IS_MANDATORY		
		O T	MAINTENANCE_TECHNICIA	WO_OPERATION: REJECTED	WO_OPERATION: STARTED			
		OT	FIELD_SERVICE_TECHNICIA	N WO_OPERATION: RECEIVED	WO_OPERATION: ACCEPTED			
		O T	FIELD_SERVICE_TECHNICIA	N WO_OPERATION: RECEIVED	WO_OPERATION: REJECTED			
		OT	FIELD_SERVICE_TECHNICIA	N WO_OPERATION: ACCEPTED	WO_OPERATION: TRAVEL			
		OT	FIELD_SERVICE_TECHNICIA		WO_OPERATION: STARTED			
		OT	FIELD_SERVICE_TECHNICIA		WO_OPERATION: ONSITE			
		O T	FIELD_SERVICE_TECHNICIA		WO_OPERATION: STARTED			
		O T	FIELD_SERVICE_TECHNICIA		WO_OPERATION: TRAVEL			
		O T O T	FIELD_SERVICE_TECHNICIA	N WO_OPERATION: STARTED	WO_OPERATION: HOLD			

8.2 Expense and Mileage Configuration

SAP Service and Asset Manager supports expense and mileage entries for the Field Service Technician persona.

The configuration of separate *Activity Types* and *Work Center* combinations are required to be able to enter expenses and mileage using SAP Service and Asset Manager. Expenses and mileage are entered as *IW41* confirmations in the back end. Both planned and unplanned mileage recordings are supported. Since the Expense and Mileage entries are stored in the backend as confirmations, due to the limitation of the corresponding field in the backend, a single decimal place is supported for the Expense and Mileage values.

(i) Note

Since the IW41 confirmation only supports time-related units of measurement (for example hours and minutes), dummy units of measurement are displayed on the screen to make it more user friendly. However, the confirmation is posted to the back end with the Unit of Measure Minutes by default.

(i) Note

Expense and Mileage entries are stored in the back end as confirmations. Due to limitations of the corresponding field in the back end, a single decimal space is supported for expense and mileage values.

The parameters configured in the Configuring Mileage and Expense Parameters [page 308] procedure display as the *Activity Type* and *Work Center* fields in the app after you enter the order and operation number. If the *Work Center* parameter isn't defined, then this parameter is inherited from the operation. You can select a different *Activity Type* and *Work Center*, but it requires knowledge on the values that are selected to avoid errors when the data is posted to the back end.

8.2.1 Configuring Mileage and Expense Parameters

Prerequisites

Expense and mileage reporting is enabled on the mobile app when the following conditions are met:

- The user is assigned to the Field Service Technician persona.
- The PM_EXPENSE_REPORT and PM_MILEAGE_REPORT are enabled.

User P	ersonas oMDO Assignment xChange O	bject Assignment Push Scenario Assignmer			
~ Ap	ply Filters				
	User Persona:	~			App. Feature Id
eature	Assignment				
Display	Option 🗸				
	User Persona	App. Feature Id	In-Scope	Active Flag	
	FIELD_SERVICE_TECHNICIAN	CA_ATTACHMENT	~	Image: A start of the start	
		CA_BUSINESS_PARTNER	~	V	
		CA_CORE_DATA	~	 Image: A start of the start of	
		CA_GEOSPATIAL_INFO_SERVICE	1	1	
		CA_SERVICE_REPORT	2	1	
		CA_SIGNATURE_CAPTURE		v	
		CS_NOTIFICATION	2	2	
		CS_SERVICE_ORDER	1	1	
		MM_MATERIAL_DATA	1	1	
		MM_STOCK_LOOKUP		1	
		MM_TECHNICIAN_GOODS_ISSUE	~	~	
		PM_CONFIRMATION			
		PM_EXPENSE_REPORT	1	v	
		PM_MILEAGE_REPORT	1		
		PM TECH OBJECT	1	1	

(i) Note

You can enable the expense reporting and mileage reporting features for the Maintenance Technician persona.

Context

Use this procedure to configure the following parameters:

- EXPENSES group:
 - ExpenseActivityType: Activity type created for expenses. The defined value is the default displayed in the *Expense Type* field on the app.
 - ExpenseWorkCenter: The work center associated with the activity type defined for expenses.
- MILEAGE group:
 - MileageActivityType: Activity type created for mileage.
 - MileageWorkCenter: The work center associated with the activity type defined for mileage.
 - MileageUOM: The unit of measure (for example, miles or kilometers) displayed on the app.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

- 2. The *ExpenseActivityType* and *ExpenseWorkCenter* parameters are found in the *EXPENSES* group. You can scroll down to find the parameter, or perform a search using the *Search* box. Highlight the desired parameter and click the *Change* button.
- 3. Configure the expense parameters as desired.

③ Note

The UOM for expenses displayed on the SAP Service and Asset Manager screen is the currency field inherited from the order header.

General Mobil	e Status Setting	Conversion E	xit Setting	System Components	Parameters	Client Globals	User Attributes	Application	Persona F	eatures	Sync Group	ps
Mobile Applica	tion Info											
Mobile Application:	SAP_SERVICE_A	SSET_MANAG	ER	Release	:							
Mobile App. Desc.:	SAP Service and	Asset Manager										
Application Par Parameter List								Search:				<u> </u>
RecNo	Parameter Group	∇	Param. Nar	me	Para	am. Value	∇	Scope	Dep. Re	Acti	No Chan	Comment
• 000000039	EXPENSES		ExpenseAc	tivityType				Applicat	000000000		 Image: A start of the start of	
000000040	EXPENSES		ExpenseWo	orkCenter				Applicat	0000000000		1	

4. The *MileageActivityType*, *MileageWorkCenter*, and *MileageUOM* parameters are found in the *MILEAGE* group. You can scroll down to find the parameter, or perform a search using the *Search* box.

Iobile Applie	cation Info										
obile Applicatio	on: SAP_SERVICE_ASSET	T_MANAG	ER	Release:							
lobile App. Des	c.: SAP Service and Asset	t Manager									
polication P	arameters										
ppucation P											
arameter Li	st						Search:				
arameter Li	st	7	Param. Name		Param. Value	Ÿ		Dep. Re	Acti	No Chan	line and the second
arameter Li	St prt	Ÿ	Param. Name MileageActivityType		Param. Value	Ŷ	Scope	Dep. Re 0000000000		No Chan	line and the second
arameter Li	St Parameter Group 3 MILEAGE	V	_		Param. Value	V	Scope Applicat	STREED CONTRACTOR	~		line and the second

- 5. Configure the mileage parameters as desired.
- 6. Save your changes.

8.2.2 Assignment Type for Planned Expenses and Mileage

When planned expenses and mileage are supported, certain assignment types are not impacted, while others must be addressed.

Since the planned expenses and mileage would involve adding additional operations, additional administrative steps or configuration may be needed to ensure that all operations, including expenses and mileage operations, are downloaded to SAP Service and Asset Manager.

Not Impacted Header Assignment Types

The following header assignment types are not impacted, because the entire order with all the operations is downloaded to the SAP Service and Asset Manager:

- Header Level Person Responsible
- Header Level Planner Group
- Header Level Business Partner
- Header Level Work Center

Assignment Types That Must Be Addressed

- **Operation Level Personnel Number**: To ensure that the planned expense and mileage operations are downloaded, ensure that each technician who works on the order is assigned to operations with expense and mileage activity types.
- **Sub-Operation Level Personnel Number**: To ensure that the planned expense and mileage operations are downloaded, ensure that each technician who works on the order is assigned to operations with expense and mileage activity types.
- **Capacity Requirements**: Planned operations with the expense and mileage activity types must be assigned to all technicians working on the order.
- Operation Level Work Center: If the customer has different work centers for mileage and expenses, a user attribute must be created to support multiple work center assignments. This user attribute must be assigned to the OPER_WORK_CENTER filter of the SAM2205_WORK_ORDER_GENERIC oMDO. Ensure that the expense and mileage work centers are also assigned to the technician via the User Administration section in the Administration and Monitoring Portal.

8.3 FSM Smartforms

SAP Service and Asset Manager supports FSM smartforms that allow planning board administrators to efficiently gather technician activity information in an organized way. Planning board administrators can assign

smartform instances to activities and require technicians to fill out the smartform instance before completing the activity.

Prerequisites

To use and preconfigure the FSM smartforms within SAP Service and Asset Manager, refer to the SAP Service and Asset Manager Integration with Field Service Management Scheduling [page 291] section.

8.3.1 Configuring FSM Smartform DTO Versions

MAIF has an oData Model that defines configurations and settings for sets of entities. Similarly, FSM has a data model for various entities, which are called DTOs. The DTOs have different versions as new features are developed for each DTO.

Context

Procedure

- 1. Log in to the *Administration and Monitoring Portal* in the backend (transaction code /SYCLO/ADMIN). On the *Administration* tab, select *Server Management*.
- 2. In the search parameters, enter:
 - Mobile Application = SAP Service and Asset Manager 2210
 - Server Name = SAM_FSM
- 3. Select the appropriate entry in the search results and navigate to the *Additional Properties* tab in the *Middleware Server Detail* section.
- 4. Add the following properties in the *Property List*:

Property Group	Property Name	Property Value
HEADERPARAM	ATTACHMENT_DTO_VERSION	14
HEADERPARAM	INSTANCE_DTO_VERSION	19
HEADERPARAM	ITEMPLATE_DTO_VERSION	19

The DTO versions can be changed to a newer version if necessary. For more information on DTO versions, refer to the https://help.sap.com/docs/SAP_FIELD_SERVICE_MANAGEMENT/fsm_data_model/data-model-overview.html documentation.

5. Save your changes.

8.3.2 Smartform Instance and Template oMDO filters

Context

Procedure

- 1. Log in to the Configuration Panel in the backend (transaction code /SYCLO/CONFIGPANEL).
- 2. Navigate to b oData Mobile Data Object Configuration SAP_SERVICE_ASSET_MANAGER_2210
 SAM2210_FSM_FORM_INSTANCE .
- 3. Navigate to the Data Filter tab Operation READ Standard Filter .
- 4. The following filters should be noted:
 - MAX_INSTANCES: This filter controls the maximum number of instances that can be loaded during synchronization.
 - GET_CLOSED: If this filter is set to true, closed smartform instances will also be loaded.
- 5. To configure MAX_TEMPLATES, which has the same functionality as MAX_INSTANCES but for smartform instances, follow all previous steps but search for the SAM2210_FSM_FORM_TEMPLATE oMDO.

9 Field Service Technician Configuration on an S/4 Field Service Management Back End

9.1 Configuring Connectivity between SSAM and FSM

Prerequisites

Ensure that a basic integration structure exists between the S/4 Service module in the S/4HANA backend and the FSM to enable data replication between the SAP backend and the FSM.

The following replication scenarios must already be active and implemented between the SAP ECC or S/ 4HANA backend and the FSM:

1. Status Updates: Status updates from SSAM will be transmitted to the FSM Planning and Dispatching Tooll. Since the FSM only supports Activity (Item) level assignment, status transitions are only supported for assigning a service item to a business partner. Only statuses mapped to FSM service workflow statuses will be transferred to the FSM.

2. Technician Location Tracking: The technician location obtained from SSAM will be updated in FSM so that it can be seen on the FSM Service Map.

3. FSM Smart Forms: FSM Smart Forms can be assigned to a service item, downloaded and completed in SSAM.

(i) Note

Rejection and transfer of items is not supported in SSAM with FSM scheduling integration scenario.

For more information, refer to the Integration with SAP Field Service Management topics.

Context

Procedure

1. Create a client in SAP FSM

- Log on to your FSM administrative URL
- Create a new client with the following parameters:
 - Client Authentication Method = CLIENT_SECRET
 - User Groups = Admin
 - Save the Client Id and Client Secret
- 2. Configure STRUST in the SAP Backend
 - Download the ISRG Root X1 certificate. The .pem file can be downloaded.

O Note

For more information, refer to the Announcing Root Certificate Change topic.

- Install the ISRG Root X1 certificate against SSL Client (Anonymous) in the Trust Manager
- 3. Create RFC Destinations in the SAP Backend
 - 1. Create a destination for establishing the oAuth connection between the SAP backend and FSM with the following parameters:
 - Name: <e.g. SSAM2310_FSM_OAUTH>
 - Connection Type: G (HTTP Connection to External Server) Under Technical Settings:
 - Target Host: auth.coresuite.com
 - Path Prefix: /api/oauth2/v1/token
 - Under Logon & Security:
 - Select Basic Authentication
 - In the User and Password section, enter the client ID and client secret from step 1
 - In the Security Options section, specify the following:
 - SSL = Active
 - SSL Certificate = ANONYM SSL Client (Anonymous)
 - 2. Create a destination for implementing the API calls to FSM with the following parameters:
 - Name: <e.g. SSAM2310_FSM_API>
 - Connection Type: G (HTTP Connection to External Server) Under Technical Settings:
 - Target Host: us.coresuite.com
 - Under Logon & Security:
 - Select Do not use a user
 - In the Security Options section, specify the following:
 - SSL = Active
 - SSL Certificate = ANONYM SSL Client (Anonymous)

9.2 Configuring Server Parameters

Context

Procedure

- 1. Log in to the administration and monitoring portal in the backend (transaction /SYCLO/ADMIN). On the *Administration* tab, select *Server Management*.
- 2. Create a new server with the name SAM_FSM for the application SAP_SERVICE_ASSET_MANAGER_2310.

Serial No:	AM_FSM	Y	Server	Port: 00000		Q Search
Search Result iew: [Standard View] Server Name Port		Y				
ew: [Standard View] Server Name Port		×				
Server Name Port		×				
	Serial No. Mobil					
CANA COM TODO		е Арр	Lock Flag	Disable Outb. Trigger	Created On	
) ann ran 700a	SCP SAP_	SERVICE_ASSET_MANAGER_231	0		06.07.2023 16:34:15	C Creat
Middleware Server I	Detail (Display N	lode)				
/ Change						
Basic Info A	dditional Properti	15				
Mobile Ap	plication: SAP Se	rvice and Asset Manager 2310			Server GUID.*	
Serve	Name:* SAM_F	SM			Port.	
Middleware Sv						

3. On Server Properties tab, save the following properties:

Property Group	Property Name	Property Value
AUTHENTICATION	RFC_OAUTH_S4	<pre><name 3.a="" in="" of="" rfc="" step="" the=""> RFC_OAUTH_S4: <e.g., ssam2310_fsm_oauth=""></e.g.,></name></pre>
AUTHENTICATION	RFC_API_S4	<name in<br="" of="" rfc="" the="">Step 3.b> RFC_API_S4: <e.g., SSAM2310_FSM_API></e.g., </name>
HEADERPARAM	ACCOUNT_S4	<fsm account="" name=""></fsm>
HEADERPARAM	ACCOUNT_ID_S4	<fsm account="" id=""></fsm>
HEADERPARAM	COMPANY_S4	<fsm company="" name=""></fsm>
HEADERPARAM	COMPANY_ID_S4	<fsm company="" id=""></fsm>

Property Group	Property Name	Property Value
HEADERPARAM	CLIENT_ID	<client e.g="" fsm.="" id="" send="" sy-<br="" to="">Sid.Client></client>
HEADERPARAM	CLIENT_VERSION	1.0

The following additional server parameters can be defined as needed, but they are not mandatory. Their default values are listed below. Changing these values may result in having to refine the backend integration code.

Property Group	Property Name	Property Value	Description
AUTHENTICATION	AUTH_TYPE	OAUTH	Authentication type used to communicate with FSM – Default OAUTH
DTO	STATUSDEF	ServiceAssignmentStatus- Definition.9	FSM Data Transfer Object (DTO) version. Can be
	ITEM	Item.23	 changed if a newer version of a DTO is needed.
	EQUIPMENT	Equipment.23	_
	BUSINESSPARTNER	BusinessPartner.23	_
	ADDRESS	Address.21	_
	PERSON	Person.24	_
	SERVICEASSIGN	ServiceAssignment.28	_
	SERVICECALL	ServiceCall.26	_
	ACTIVITY	Activity.39	_
	SERVICEASSIGNSTATUS	ServiceAssignmentSta- tus.15	_
INTEGRATION	CREATEPERSON	admin	User to create new objects in FSM (applies to SSAM only)
UI_URL_PATH	ADDRESS	/api/data/v4/Address	URI strings for calling FSM
	EQUIPMENT	/api/data/v4/Equipment	[—] api
	ITEM	/api/data/v4/ltem	_
	PERSON	/api/data/v4/Person	_
	BUSINESSPARTNER	/api/data/v4/Business- Partner	_
	SERVICEASSIGN	/api/data/v4/ServiceAs- signment	_
	QUERY	/api/query/v1	_
	SERVICEASSIGNSTATUS	/api/data/v4/ServiceAs- signmentStatus	_
	SERVICECALL	/api/data/v4/ServiceCall	_

Property Group	Property Name	Property Value	Description
	SERVICEORDERCREATE	/service-manage- ment/api/v2/composite- tree/service-calls?autoC- reateActivity=false	
	ACTIVITY	/api/data/v4/Activity	_

9.3 Configuring Persona

Context

The following configurations are required to use the FSM scheduling integration scenarios in FSM:

- 1. You must add the FIELD_SERVICE_TECHNICIAN persona assigned to the user.
- 2. In the configuration panel, navigate to the component assignment for the mobile application and ensure that the FSM_SCHED_INTEGRATION and CA_LOCATION_UPDATE features are enabled, as they are disabled by default.

A	pply Filters					
	User Persona:	~			App. Feature Id:	
					rep. r colore id.	
atu	re Assignment					
lispl	ay Option V					
-	User Persona	Ann Frankrish Id	In Course	Anthen Floor		
		App. Feature Id	In-Scope	Active Flag		
	FIELD_SERVICE_TECHNICIAN	CA_GIS_ADD_EDIT				
		CA_LOCATION_UPDATE	1			
)		EAM_CHECKLIST				
		EAM_PHASE_MODEL				
		FOW_ROUTE				
		FSM_SCHED_INTEGRATION	2			
		HR_TIMESHEET				
		IAM_CHECKLIST				
		IAM_INDICATORS				
		ISU_METER_MANAGEMENT				
		MM GOODS ISSUE	Ö			
		MM GOODS RECEIPT	n			
		MM PHYSICAL INVENTORY	n			
		MM_STOCK_TRANSFER	n			

9.4 Configuring Statuses

Context

For the FSM scenario, only assignment type 2 is supported, and status changes are therefore only supported at the operation level. The default SSAM statuses supported for the Field Service Technician persona are defined in the *Mobile Application* Mobile Status Settings configuration:

Object Type	Mobile Status	Initial Status (Y/N)	Status Attribute 1 (FSM sta- tus)
S4_SRV_ITEM	RECEIVED	Υ	new
S4_SRV_ITEM	ACCEPTED		accept
S4_SRV_ITEM	TRAVEL		travel
S4_SRV_ITEM	ONSITE		
S4_SRV_ITEM	STARTED		work
S4_SRV_ITEM	HOLD		
S4_SRV_ITEM	COMPLETED		close
S4_SRV_ITEM	TRANSFER	No status update	

If any additional SSAM statuses are used or a custom service workflow is applied in the FSM then additional statuses can be configured in the *Mobile Application Mobile Status Settings* configuration. In this case it may require customization at the back end and/or MDK level depending on how the statuses are to be used.

General Mob	ite Status Sett	ing Conversi	ion Exit Setting	System Con	nponents	Parameter	s Client	Globals	User At	tributes
Mobile Applicati	on Info									
Mobile Application:	SAP_SERVIC	E_ASSET_MANAG	ER_2310	Release: 23	10					
Mobile App. Desc.:	SAP Service	and Asset Manager	2310							
Mobile Status M	apping									
Mobile Status List										
Object Type	Mobile Status	Status Attribute 1	Status Attribute 2	System Status	Status Profile	User Status	Initial Status	Skip Update	Disabled	
S4_SRV_ITEM	ACCEPTED	ACCEPT								•
S4_SRV_ITEM	COMPLETED	CLOSE		11005						
S4_SRV_ITEM	HOLD									
S4_SRV_ITEM	ONSITE									
S4_SRV_ITEM	RECEIVED	NEW					0			
S4_SRV_ITEM	REJECTED			11005						
Mobile Status	Detail									
Object Type	S4_SRV_IT	EM							Mobile	Status Alias Lis
Mobile Status	TRAVEL			Label On Mo	bile: enrout	e				

The default status transitions are defined in the oMDO SSAM2310_OVERALL_STATUS, filter MOBILE_STATUS_STATE_MACHINE. If additional status transitions are required or existing ones need to be modified, the filter values in this oMDO must be changed. This may require customization at the back end and/or MDK level depending on how the status transitions work.

oMDO Id:	oMDO Id: SAM2310_OVERALL_STATUS		Descrip	otion: Overall Status Map	ping			
Mobile Application: SAP Service and Asset		Manager 2310						
oMDO Handler:	/MERP/CL_PM_OVERA	ALL_STATUS						
General Setting 1	echnical Model Info	Data Filter Field S	election Change Detection	on Dependent Object	t Transaction Settings	Outbound Trigger Assignment		
Defined Filters	t-	Table Rule Editor						
Operation - READ			READ	The block	MODULE CENTRE AN	CULUE:		
✓ I Standard Filter		Operation		Filter Name:	MOBILE_STATUS_STATE_M/	ACHINE		
	LE_STATUS_SEQ*	Reference Table Name	Reference Table Name: //MERP/PM_MBLSTAT_STATM		MACH			
		Rule Category	Static Table Rules	~				
	TUS_STATE_MACHINE*		ROLE_TYPE:	Technician				
V NOTIFICATIO			USER_PERSONA:	MAINTENANCE TECHNIC	CIAN			
V ORDER_TYP	E*		FROM STATUS:	NOTIFICATION: RECEIVE	D			
V OVERALL_ST	TATUS_PROFILE		and the second					
			TO_STATUS:	NOTIFICATION: STARTED				
			IS_MANDATORY:	False				
			FLAG_DISABLED:	Inactive				
			FEATURE_ID:					
			PHASE_MODEL_RELEVANT:					
			TRANSITION_TYPE:	Primary Positive				
				(many) counts				
		Rule List						
		ROLE_TYPE	USER_PERSONA	FROM_STATUS	TO_STATU	IS_MANDATORY		
		OT	FIELD_SERVICE_TECH	NICIAN S4_SRV_ITEM	ACCEPTED S4_SRV_I	TEM: STARTED		
		OT	FIELD_SERVICE_TECH	NICIAN S4_SRV_ITEM:	ACCEPTED S4_SRV_I	TEM: TRAVEL		
		OT	FIELD_SERVICE_TECH	NICIAN S4_SRV_ITEM:	STARTED S4_SRV_I	TEM: HOLD		
		OT	FIELD_SERVICE_TECH	NICIAN S4_SRV_ITEM:	STARTED S4_SRV_I	TEM: COMPLETED		
		OT	FIELD_SERVICE_TECH	NICIAN S4_SRV_ITEM:	TRAVEL S4_SRV_I	TEM: ONSITE		

9.5 Auto Release of S4 Service Orders

When a service order is created in SSAM, you can configure that the service order is automatically released when it is published in SAP.

To set up automatic release of an order, you must perform the following configuration:

• Configure the AUTO_RELEASE filter for the CREATE operation in oMDO SAM2310_S4_SERVICE_ORDER - Filter I = 'X' must be active.

oMDO Id: Mobile Application:	SAM2310_S4_S SAP Service and	SERVICE_ORDER d Asset Manager 2	310			S/4 Service Order		
oMDO Handler: General Setting T	/MERP/CL_SRV	_ORDER_OD : oM		tion Change I	Detection	Dependent Object	Transaction Setting	s Outbound Trigger Assignment
Defined Filters	t=	Rule Editor						
Operation - CREAT Security	E	Operal Object Na		_STR		Filb Reference Fie	er Name: AUTO_RELI	EASE
✓ Standard Filter Data Filter Rule Key: ✓ AUTO_RELEASE*			Key: SAM2310_S4	SAM2310_S4_SERVICE_ORDER.CREATE.AUTO_RELEASE				
マ BUSINESS_C	DBJECT*	Filter Rule T	ype: Static Value in Value	Range Table Forma	t v			
O Operation - READ O Operation - UPDAT	E	Low Value: High Value:	X - True	Option: =				
		Rule No.	Rule Type Rule Value	•		Active Flag	1	
		 00001 	RANGE X			9		

10 Linear Asset Management Configuration

Linear assets are technical systems with a linear infrastructure whose condition and properties can vary from section to section (dynamic segmentation). You can see linear asset data associated with various objects such as work orders, operations, technical objects, and notifications.

In addition to the basic SAP Service and Asset Manager configuration, there are a few considerations when configuring SAP Service and Asset Manager with Linear Asset Management (LAM).

Configuration items include:

- Disabling and re-enabling LAM
- Enabling technical objects work list feature
- Adding the LAM equipment type filter
- Adding linear data for statistics

Each of these configuration items is described in the sections that follow.

O Note

Before configuring LAM on your system, see 2900476 / so that the LAM exchange works properly.

10.1 Disabling and Re-Enabling Linear Asset Management

Linear Asset Management (LAM) is especially designed to meet the requirements of linear asset maintenance. A linear asset is a special type of asset that has an associated length dimension. This dimension is represented through starting and ending points or by specifying the asset length. For the mobile device, the linear asset management functionality enables the field technician to work on orders and notifications that have linear equipment and functional locations. Field personnel can create work orders, notifications, time confirmations, and material confirmations for the linear assets.

From the mobile device, you can view linear data for the following:

- Work orders
- Operations
- Notifications
- Items
- Equipment
- Functional locations
- Confirmations
- Measuring points
- Measurement documents

You can create or edit linear data on characteristic values.

The Linear Asset Management feature is called *PM_LINEAR_ASSET_MANAGEMENT*. By default, the feature is not enabled.

③ Note

As of the SAP Service and Asset Manager 2205 release, enable and disable parameters are no longer available through the *Parameters* tab. You enable or disable all features through the *Features* tab. See the Configuring Features [page 90] procedure for details.

Use the following OMDOs to configure your LAM feature:

- LAM_OBJECT_DATA
- LAM_OFFSET_TYPE
- LINEAR_REFERENCE_PATTERN

For general information on configuring OMDOS, see the OData Channel Integration Settings Procedures topics found in the Mobile Add-On Configuration Configuration Panel Common Procedures chapter of this guide.

10.2 Adding Linear Data for Characteristics

The functionality of adding or editing linear data for characteristics defines segments of a linear asset where a specific attribute, or characteristic value, is valid. A segment is defined by start point, end point, length, and unit of measurement (linear data).

Relevant OMDO: SAM2310_LAM_CHAR_VALUE.

③ Note

- Linear data for characteristics works only for characteristics that are marked as relevant for linear asset management.
- To use linear data for characteristics, create a special *Organizational Area* and assign it to the relevant classes and characteristics.
- It's possible to assign several characteristic values in different segments of a linear asset. Therefore, set the value assignment to *multiple values* when the characteristics are created.

11 Meter Management Configuration

The Meter Management component is delivered out of the box with predefined settings, which you can change according to your back-end system setup. The following settings, however, have to be set:

- Binding Industry Solutions & Utilities (ISU) process type to work order type
- Setting the optimal meter reading history
- Binding meter reading reason relevant for technical installation
- Binding meter reading notes based on the ISU process type

11.1 Binding ISU Process Type to Work Order Type

Binding the ISU process type to the work order type provides the SAP Service and Asset Manager application the correct representation of what process type is being conducted with the different work order types. This binding is located in the **SAM2310_ORDER_ISULINK** OMDO, under the *Read* filter. You can update these filters according to your business process.

All assignment types are supported for the Meter Management component.

The following filters represent binding criteria for different process types. By default, the ISU process types are bound to order types as follows:

Filter Name	Туре	Value	Comments
ORDTYPE_DISCONNECT	Standard Filter	DC01	Used for the disconnect
	Mandatory	RC01	process
ORDTYPE_INSTALL	Standard Filter	SM01	Used for the installation
	Mandatory		process
ORDTYPE_READING	Standard Filter	MR01	Used for the meter reading
	Mandatory		process
ORDTYPE_REMOVE	Standard Filter	CU01	Used for the remove process
	Mandatory		
ORDTYPE_REPAIR	Standard Filter	SM02	Used for the repair process
	Mandatory		

Filter Name	Туре	Value	Comments
ORDTYPE_REPLACE	Standard Filter	RP01	Used for the replace process
	Mandatory		

To change the default binding for a particular process, complete the steps below:

- On the ConfigPanel home page, choose OData Mobile Data Object Configuration. Make sure that you select your desired mobile application in the Mobile Application Filter field at the top of the page.
- 2. From the *OData Mobile Data Object List* select desired OMDO object, such as **SAM2310_ORDER_ISULINK**, and then click the *Data Filter* tab.
- 3. Expand the *Defined Filters* list under the *READ* operation with the standard filter. Select the filter that you want to update from the list of available filters as listed in the table in this topic. Choose the *Change* button from the menu.
- 4. Set the order type for the desired process type you have selected.
- 5. Save your changes.

11.2 Binding Meter Reading Notes Based on ISU Process Type

The back end ISU system configuration specifies which meter reading notes are relevant for the major ISU process types. This configuration has to be replicated in the OData Mobile Data Object **SAM2310_METER_READING_NOTE** under the *READ* operation with the standard filters, so that the SAP Service and Asset Manager application reflects the proper meter reading notes for a specific process type. The default configuration lists the meter reading notes relevant for the ISU process. However, you can change it if you have different requirements in your back end configuration.

Filter Name	Туре	Value	Comments
DISCONNECT_NOTE_RE-	Standard Filter, Mandatory	01	Used for the disconnect
MOVE		04	notes for the remove process
		05	
METERREAD_NOTE _IN-	Standard Filter, Mandatory	01	Used for the meter read-
STALL		04	ing notes for the installation process
METERREAD_NOTE _RE-	Standard Filter, Mandatory	04	Used for the meter reading
MOVE		05	notes for the remove process

To change the default binding for a particular process, complete the following steps:

1. On the ConfigPanel home page, choose OData Mobile Data Object Configuration.

Make sure you select your desired mobile application in the *Mobile Application Filter* field at the top of the page.

- 2. From the OData Mobile Data Object List select desired OMDO object, such as SAM2310_METER_READING_NOTE, and then click on the Data Filter tab.
- 3. Expand the *Defined Filters* list under the *READ* operation with the standard filter. Select the filter that you want to update from the list of available filters as listed above. Choose the *Change* button from the menu.
- 4. Set the meter reading note for the desired ISU process type you have selected.
- 5. Save your changes.

11.3 Meter Reading History Interval Definition

The default setting for meter reading history is to include all meter readings from the past 30 days till the current day. If you have a different requirement, you can change it from the OData Mobile Data Object **SAM2310_METER_READING** under the READ operation with the standard filter *METERREAD_SCHEDDATE* as shown in the following example.

oData Mobile Data Object Detail (Display I	Mode)				
Create Copy Delete 🖉 Change					
oMDO Id: SAM _METER_READ	NG		Description: Meter Reading		
Mobile Application: SAP Asset Manager					
oMDO Handler: /MISU/CL_BTX_METER	_READ_V2_OD : oN				
General Setting Technical Model Info	Data Filter F	Field Selection Change Detect	on Dependent Object Tran	saction Settings Outbound Trigger Assig	Inment
Defined Filters	Rule Editor				
✓ [*] Operation - READ ✓ I Data Distribution	Operation:	READ	Filter Name:	METERREAD_SCHEDDATE	
BOBJECT_DISTRIBUTION_MODE*	Object Name:	EABL	Reference Field Name:	ADATSOLL	
V E Standard Filter	Data Filter Rule Key:	SAM _METER_READING.READ.ME	TERREAD_SCHEDDATE		
GET_HISTORY*	Filter Rule Type:	Filter Handler	~		
F METERREAD CATEGORY					
WETERREAD_DATE	Select Filter H	landler			
WETERREAD_REASON*	Handler:	oMDO Filter Rule - Date Range			
METERREAD_SCHEDDATE*	Input Parameter:	CURRENT_DATE=TODAY&FROM_DATE	_OFFSET=30&TO_DATE_OFFSET=30		
	Active Flag:	✓			
p merendede_onn					
	Rule List				
		Rule Type Rule Value			Active Flag
	00001	HANDLER /MFND/CL_CORE_DATE_F	RANGE_ORU?CURRENT_DATE=TODAY8	FROM_DATE_OFFSET=30&TO_DATE_OFFSET=30	

11.4 Binding Meter Reading Reasons Relevant for Technical Installation

The back end ISU system configuration specifies explicitly which meter reading reasons are relevant for technical installation. These are the only reasons displayed on the SAP Service and Asset Manager application when completing a meter reading during the technical installation process. Set this binding in the OData

Mobile Data Object **SAM2310_METER_READING_REASON** under the *READ* operation with the standard filter *MR_REASON_TECHINST*.

The default configuration contains meter reading reasons 08 and 09 as required for technical installation. If you have different requirements for your back end configuration, you can change these defaults.

oData Mobile Data Obje	ct Detail (Display	Mode)						
Create Copy	Delete 🥖 Change							
oMDO Id:	SAM METER_READ	DING_REASON			Description:	Meter Reading F	Reason	
Mobile Application:	SAP Asset Manager							
oMDO Handler:	/MISU/CL_CUST_MRF	EASON_OD : 0MDO						
General Setting	Technical Model Info	Data Filter	Field Sele	ction Change Detec	tion Dependent	Object Tra	ansaction Settings	Outbound Trigger Assignment
Defined Filters	*	Rule Editor						
♥ ③ Operation - READ ♥ I Standard Filter ♥ MR_REASON ♥ MR_REASON_TEC ♥ UPLOAD_FLAG	'HINST'	Operatio Object Nam Data Filter Rule Ke Filter Rule Typ Enter Range Sign: Inc	e: TE609 y: SAM _N e: Static Valu Value usive	IETER_READING_REASON ve in Range Table Format Option: = upon technical inst.		Filter Name: ence Field Name: ECHINST	MR_REASON_TECH ABLESGR	INST
		Rule List						
		Rule No.		Rule Value			Active Flag	
		00001		08			~	
		00002	RANGE	09			~	

12 Quality Management Configuration

The Quality Management application component supports tasks associated with quality planning, quality inspection, and quality control. In addition, it controls the creation of quality certificates and manages problems with the help of quality notifications.

Quality Management (QM) notifications are integrated with SAP Service and Asset Manager as follows:

- Display QM type notifications on the mobile device
- Create QM notifications at the inspection lot level
- Create QM notification items to record defects noted in inspections
- Maintain the association of notifications and notification items with the characteristics

Note

Before configuring QM, you must install the QM component. See the Quality Management chapter in the SAP Asset Manager Component Installation Guide for the installation procedure.

Quality Management is disabled on an out-of-the-box new SAP Service and Asset Manager installation. Use the following topics and procedures found in this chapter to enable Quality Management.

12.1 Configuring Quality Management Notification Parameters

Context

Code groups that belong together in terms of content are grouped in catalogs. These catalogs are identified by the catalog type (a number or a letter). For example, in this way, you combine:

Use the following parameter groups and associated parameters to configure Quality Management in SAP Service and Asset Manager:

- **QMFORMULA:** Inspection lots can contain points or characteristics. You can use the following formula parameters to determine the characteristic value:
 - CO: Arithmetic mean of measured values for characteristic. Standard parameter.
 - C5: Upper limit of tolerance range
 - C6: Lower limit of tolerance range
 - **C7:** Target value of characteristic
- CATALOGTYPE: Sets a usage decision on inspection lots on the client. Standard is 3
- DOCUMENT: Standard is QMQMEL

• **INSPECTION_LOT:** Controls if the user of the application can set a decision to complete an inspection lot. When you set an inspection lot to complete, defects are also automatically completed. Standard is *N*.

Procedure

1. Using the ConfigPanel, navigate to Mobile Application Configuration Parameters tab . In the left column, Defined Mobile Applications, select your application.

The Parameter List populates with a list of all parameters available for the application.

2. Type your desired parameter group into the *Search* box, or scroll to find your parameter. Highlight the parameter you want to configure and click the *Change* button. The following example uses the parameter group *QMFORMULA*.

le Application:	SAP_ASSET_	MANAGER_		Release:								
le App. Desc.:	SAP Asset Ma	anager										
lication Para	ameters											
ameter List												
Import/Export \	~									Search:		1
RecNo	Parameter	Group 🔻	Param. Name		Param. Value	T	Scope	Dep. RecNo	Active	No Change	Comment	
000000070	PMCONFIF	RMATION	Enable		N		Application	000000001	\checkmark	~		
000000071	PMCONFIF	RMATION	LaborTimeMinute	sinterval	1		Application	0000000000	~	~	Available duration for time entry in minutes	
000000072	QMFORMU	JLA	C0		ResultValue		Application	0000000000	~	 Image: A set of the set of the		
000000073	QMFORMU	JLA	C5		UpperLimit		Application	0000000000	\checkmark			
000000074	QMFORMU	JLA	C6		LowerLimit		Application	0000000000	\checkmark	 Image: A set of the set of the		
000000075	QMFORMU	JLA	C7		TargetValue		Application	0000000000	\checkmark	~		
000000076	REASON		1		no_parts		Application	000000076	\checkmark	~		
000000077	REASON		2		no_access		Application	000000077	\checkmark	\checkmark		
000000078	REASON		3		lunch		Application	000000078	\checkmark	\checkmark		
000000079	REASON		4		on_break		Application	000000079	\checkmark	\checkmark		
arameter Detail			4		on_break		Application	000000079	✓	V		
Param	eter Group:	QMFORMULA C0				Param. Scc	pe: Applicat	on				
		ResultValue				Use Language Specific Va						
Rule Io	£.					Use Rule:						
Dependent Pa	rameter Id:											
ependent Param	eter Group:											
ependent Param	eter Name:											

- 3. Make your desired parameter association changes.
- 4. Check the <Active> flag to ensure that the parameter is used by the mobile application. If desired, and if not already checked, check the <No Runtime Change> box to ensure that the value of the parameter isn't overridden at runtime through synchronization processing.
- 5. Save your changes.

Results

Your Quality Management parameters are configured and enabled.

Next Steps

Complete all other topics and procedures in the Quality Management Configuration [page 326] to fully configure and enable the Quality Management feature.

12.2 Configuring oData MDO Data Filters for Quality Management

For general information and a procedure on changing OMDO data filters, see the following topics:

- Working with oData MDO Filter Rules [page 149]
- Changing oData MDO Filter Rules [page 149]

To fully enable Quality Management, ensure that the following data filters and data filter rules are configured properly and active:

SAM2310_CATALOG_CODES

Select **SAM2310_CATALOG_CODES** from the *oData Mobile Data Object List* and navigate to *Operation - READ* Standard Filter CATALOG_TYPE . Ensure the following rules in the <Rule Value> field are set to Active:

- 8 Activities (QM)
- 9 Defect Types
- D Coding

SAM2310_DOCUMENT

When you enable QM on the **SAM2310_DOCUMENT** data filter, you enable the ability to attach documents to an inspection. When mobile client users take a reading on the SAP Service and Asset Manager application, they can attach documents that relate to the inspection on work orders, equipment, functional locations, or notifications.

Select **SAM2310_DOCUMENT** from the oData Mobile Data Object List and navigate to the following locations:

- Deration CREATE_MEDIA > Data Segment > DOCUMENT_SWITCH >
- Deration READ > Data Segment > DOCUMENT_SWITCH >

Set the following objects in the Rule List to Active:

- QMQEL: QM notification
- QMTBLOC: Inspection method

Ensure that both BDS and GOS are set to Active.

Navigate to Operation - READ Standard Filter DOC_LINK_OBJ and ensure the following are set to Active:

- QMTBDOC: Inspection method attachment
- QMQMEL: QM notification attachment

SAM2310_INSPECTION_LOT

Set the dependency to get inspection lots based on work orders related to the inspection assigned to the mobile client user as follows:

Select **SAM2310_INSPECTION_LOT** from the oData Mobile Data Object List and navigate to Dependency *READ* Data Distribution OBJECT_DISTRIBUTION_MODE. Ensure that <Range Value> 2 - Dependency Queue is set to Active.

Navigate to the *Dependent Object* tab. Ensure that <Source Tech Entity Type> *INSPECTIONLOT* is connected to <Dependent OMDO ID> **SAM2310_NOTIFICATION_GENERIC** and is set to *Active*. When a mobile client user fetches the inspection lots, the related defects, created as QM notifications, are fetched as well.

Ensure that <Source Tech Entity Type> *INSPECTIONCHAR* is connected to <Dependent oMDO ID> **SAM2310_INSPECTION_HISTORY** and is set to *Active*. The fetched inspection history is based on the inspection characteristics available.

SAM2310_NOTIFICATION_GENERIC

Select **SAM2310_NOTIFICATION_GENERIC** from the *oData Mobile Data Object List* and navigate to *Operation - READ Data Distribution NOTIF_ASSIGNMENT_TYPE*. Ensure that <Range Value> *D* is active.

Navigate to Operation - READ Data Distribution NOTIF_TYPE Ensure that <Input Parameter> QM is active.

SAM2310_NOTIF_PARTNER_DET_PROC

Enabling QM in the **SAM2310_NOTIF_PARTNER_DET_PROC** object means that selecting a business partner is mandatory when a user creates a QM notification.

Select **SAM2310_NOTIF_PARTNER_DET_PROC** from the *oData Mobile Data Object List* and navigate to *Operation - READ Standard Filter NOTIF_TYPE*. Ensure that <Input Parameter> QM is active.

SAM2310_NOTIF_TYPE

Select **SAM2310_NOTIF_TYPE** from the *oData Mobile Data Object List* and navigate to *Operation - READ Standard Filter*. Ensure that Quality Management is enabled in the following locations:

- NOTIF_CATEGORY: Ensure that <Range Value> 02 Quality Notification is active.
- NOTIF_PRIORITY_TYPE: Ensure that <Range Value> QM QM Priorities is active.
- NOTIF_TYPE: Ensure that <Input Parameter> QM is active.

SAM2310_PRIORITY

Select **SAM2310_PRIORITY** from the oData Mobile Data Object List and navigate to Operation - READ Standard Filter PRIORITY_TYPE . Ensure that <Rule Value> QM is active.

SAM2310_WORK_ORDER_GENERIC

Enable the dependency between a work order and a related inspection lot on the mobile device:

Navigate to the *Dependent Object* tab. Find the *WOHEADER* objects in the <Source Tech. Entity Type> column. Scroll to find the **SAM2310_INSPECTION_LOT** object. Ensure it is marked as *Active*.

13 SAP Business Application Studio (instead of SAP Web IDE)

SAP Business Application Studio is the successor product of SAP Web IDE and includes all the SAP Web IDE capabilities (The UI might be different), as well as new and improved ones.

③ Note

SAP Web IDE is replaced by SAP Business Application Studio. For general information, refer to SAP Web IDE Sunset but via guide.

SAP Business Application Studio is a powerful cloud-based Integrated Development Environment (IDE) provided by SAP. It empowers developers to easily build, test, and deploy enterprise-grade applications on the SAP Business Technology Platform (BTP). It is particularly well-suited for developing with the SAP Cloud Application Programming Model, SAP Mobile Services, and SAP frontend technologies like SAP Fiori elements, SAPUI5 and the SAP Mobile Development Kit. With a comprehensive suite of development tools, frameworks, and services, developers can streamline their development process and accelerate time-to-market. A full suite of development tools – including code editors and version control – all accessible through a web browser.

SAP Business Application Studio clearly stands out for its tight integration with SAP services, technologies, and systems. Central to the architecture of the development environment are the Dev Spaces. These are specialized IDEs in the cloud that come pre-installed with everything you need for specific use-cases in SAP environments like building SAP Fiori extensions or HANA native development. SAP Business Application Studio provides clear guidance following SAP best practices and eases developers into the world of SAP technologies.

O Note

To get started with SAP Business Application Studio, refer to the SAP Business Application Studio help portal.

13.1 Migrating to SAP Business Application Studio

SAP provides support for customers migrating from the Neo environment to the multi-cloud environment.

Note

For general information about migration, see Migrating from the NEO Environment to the Multi-Cloud Foundation. In addition, there are specific SAP Web IDE migration guides covering different use cases.

See the individual use case migration guide for details, Migrating Your Mobile Development Kit (MDK) Apps from SAP Web IDE to SAP Business Aplication Studio.

SAP provides guides, documentation, and migration wizards to facilitate the migration process from SAP Web IDE to SAP Business Application Studio, but in some cases, manual migration is required. The effort to migrate

your applications varies depending on the number of applications, complexity, use case, and internal company processes.

13.2 Customizing Apps Using the Mobile Development Kit

The Mobile Development Kit for SAP Business Technology Platform Mobile Services is a metadata-based application development platform.

The Mobile Development Kit (MDK) lets you customize, deploy, and manage your customized Windows apps in the cloud. The Mobile Development Kit editor lets you edit various aspects of your application using the Mobile Development Kit editor. It also provides native client support and consumes mobile services such as onboarding, offline OData, life-cycle management, and supportability through the SAP Business Technology Platform Mobile Services using the Mobile Development Kit client.

The Mobile Development Kit allows business process experts to customize the app in a cloud-based editor using the SAP Business Application Studio, and developers to edit code directly in the metadata files.

The end-to-end use case for Mobile Development Kit includes tasks involving the following roles:

- Administrator
- Business process expert
- Developer
- User

13.3 Customizing Metadata Using the Mobile Development Kit

One of the main purposes of the Mobile Development Kit is to easily customize and redeploy metadata for your SAP Service and Asset Manager application.

A Restriction

Develop any customization on the app as a separate component in a Mobile Development Kit project. Developing customizations as a component makes it easier to maintain customizations during upgrades, as it isolates custom code. Isolating your custom code eliminates the chance of overwriting when you implement a new release.

A typical metadata customization procedure is as follows. This example assumes that metadata definitions already exist in the Mobile Development Kit and that you're customizing them, or changing them:

- 1. Locate the object you want to modify. You can modify pages, actions, or rules. See the following topics and subtopics for more information on how to create and modify the following metadata objects using the Mobile Development Kit:
 - Create Pages
 - Create Actions

• Create Rules

2. Deploy the metadata. See Creating Apps in SAP Business Application Studio (Cloud Foundry) for more information.

13.3.1 Customizing Contextual Menu Options

You can configure the context menu using rules in the metadata.

Use the following rules in the metadata to customize the contextual menu options:

- Rules/ContextMenuTrailingItems.js
- Rules/ContextMenuLeadingItems.js
- Rules/ContextMenuTable.js

The following contetual menu items are preset in the app:

Object	Assignment Type	Leading - Item 1	Leading - Item 2	Trailing - Item 1 (Synced / Local)	Trailing - Item 2 (Synced / Local)
Work Order	1, 5, 7, 8		Transfer / Hold	Edit	- / Delete
	2, 3, 4, 6	Take Reading		Edit	- / Delete
Operation	2, 4, 6		Transfer / Hold	Edit	- / Delete
	1, 3, 5, 7, 8	Confirm / Uncon- firm		Edit	- / Delete
Suboperation	3		Transfer / Hold	Edit	- / Delete
	1, 2, 4, 5, 6, 7, 8	Confirm / Uncon- firm		Edit	- / Delete
Notification				Edit	- / Delete
Equipment		Add Notification	Add Work Order	Take Readings	
Functional Loca- tion		Add Notification	Add Work Order	Take Readings	
Documents				Delete (Local)	
Reminders				Delete	
Errors				Delete	

For detailed information on working with metadata contained in the Mobile Development Kit, see the SAP Mobile Development Kit API References portal, specifically, the ObjectCell control

13.3.2 Enabling Multi-User Support

Multiple users can use the client on the same device, capabilities such as adding a new user, switching across users, and searching from a list users are supported.

Procedure

Set MultiUserEnabled to True in MDKClient_SDK/branding/BrandedSettings.json ConnectionSettings
 MultiUserSettings .

"ConnectionSettings": { "AppId": "ODataOnly", ... "MultiUserSettings": { "MultiUserEnabled": true

2. Set Allow Upload of Pending Changes from Previous User for the corresponding app to True in the mobile services cockpit.

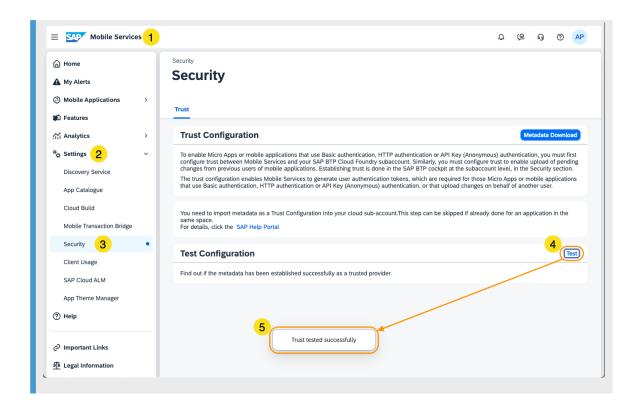
③ Note

Allow Upload of Pending Changes from Previous User ensures that any pending offline changes from the previous user are securely uploaded to the service back end. This is important when the previous user has not uploaded the offline changes, and the app is switched to a new user. Also, you must apply the following, depending on which environment you use:

- Cloud Foundry:
 - Allow Upload of Pending Changes from Previous User is available in Mobile Settings Exchange feature under Shared Devices section.
 - When you enable Allow Upload of Pending Changes from Previous User, you must also enable Passcode Policy. Passcode Policy checkbox is under Assigned Features Mobile Settings Exchange .
- Neo:
 - Allow Upload of Pending Changes from Previous User is available in Client Policies feature under Shared Devices section.
 - When you enable MultiUserEnabled, you must also enable Allow Upload of Pending Changes from Previous User and Passcode Policy to be able to onboard. Passcode Policy checkbox is under Assigned Features Client Policies .
- 3. Configure trust between SAP Mobile Services and SAP Business Technology Platform to enable upload of pending changes from previous users of mobile application. Refer to Configuring Security Trust for the steps to configure trust.

O Note

To test trust configuration, go to SAP Mobile Services > Settings > Security > Trust > Test Configuration and click Test. If the configuration is correct, it will display Trust tested successfully.



13.3.2.1 Customizing User Switch Flag

In multi-user use case, the backend needs to know when a user switch has occurred when client performs a sync.

Context

On client, tracking the current user is necessary. If the user has changed, in the subsequent sync the user switch flag must be set to true, if not, set to false.

Procedure

- 1. Use OnUserSwitch event from MDK to determine the change of user.
- 2. Use client API to get OfflineDataProviderProxy.
- 3. Set custom header UserSwitch to True in the OfflineDataProviderProxy before syncing.
- 4. Remove custom header UserSwitch when sync has completed successfully.

13.3.2.2 Customizing Multi-User Capabilities

Procedure

Logout action

1. Set SkipReset flag to True in LogoutSkipReset.action.

The invocation of logout action redirects the user to the Sign-in screen. By re-entering the passcode, the user can relogin and start using the app. In a multi-user scenario, it's recommended that each user log out before they hand over the device to a different user. The default value of this flag is *False*, which means that when the app is reset, the stored credentials are deleted. It's recommended to set this flag to *True* in a multi-user scenario. The *OnUserSwitch*.js file is called when the user switches user and the Multi-User mode is enabled. All the pending Offline OData transactions from previous user are synced.

2. Call the *isAppInMultiUserMode* function to determine if the app is in single or multi-user mode.

Push Notifications

3. Unregister for push notifications during the logout action, and reregister during the *OnLoaded* event for the next user.

When a user logs out, the user is unregistered for the push notifications. When a user signs in, the *OnLoaded* event automatically switches the push registration to the logged-in user.

13.3.2.3 Enabling Multi-User via QR Code

Context

Multiple users can log in to the same device via using a QR code.

Procedure

1. Create a QR code with CPms, and make sure that the *Allow Upload of Pending Changes from Previous User* flag is checked.

You can navigate to Allow Upload of Pending Changes from Previous User from Mobile Settings Exchange Shared Devices .

- 2. Set the *multiUser* flag to *True*.
- 3. Use the generated QR code to log in to the app.

- 4. Wait until the initial sync is performed. After the initial sync is finished, the *Logout* button displays in the *Profile Settings* section.
- 5. Tap Logout.

After logging out, you can add a new user or switch between users.

Next Steps

Verify that the switch user can be done successfully with and without pending transactions.

13.4 Customizing Deep Linking

Deep linking refers to URIs that are opened outside an application, through a link from another application. When a user opens a deep link, the user is navigated to a specific resource within the application.

Deep linking configuration is performed through the metadata. See for information on working with metadata.

Deep linking supports the Create, Update, and View actions. See the following sections for objects supported and examples of deep linking schemas for the objects.

(i) Note

If your mobile user is not allowed to create, update, or view an object on the client, that object is also disabled from the deep link. If your mobile user is using a persona that does not work with the object (for example, an inventory clerk persona is not configured to use work orders), the object is disabled from the deep link.

Create Action

- Schema without parameters: samclient://create/<entitysetName>
- Schema with parameters: samclient://create/<entitysetName>?
 <parameterName1>=<parameterValue1>&<parameterName2>=<parameterValue2>...

Following is a list of all objects supported for the create action (entitysetName, list of supported parameters), as well as an example for each object:

Create Action Objects

		Example			
MyWorkOrderHeaders	OrderDescription	<pre>samclient://create/</pre>			
	PlanningPlant	MyWorkOrderHeaders? OrderDescription=test&MainWork(
	OrderType	enter=BP_ST1			
	Priority				
	BusinessArea				
	MainWorkCenter				
	MainWorkCenterPlant				
	HeaderFunctionLocation				
	HeaderEquipment				
MyWorkOrderOpera-	OperationShortText	samclient://create/			
tions	Orderld	MyWorkOrderOperations? OperationShortText=test&OrderIo =4008337&MainWorkCenter=ZMECH			
	MainWorkCenterPlant				
	MainWorkCenter				
MyWorkOrderSubOper-	OperationShortText	samclient://create/			
ations		MyWorkOrderSubOperations? OrderId=4008337&MainWorkCenter=			
	OperationNo	BP_ST1			
		<pre>OperationShortText=text&OrderId =4054781&OperationNo=0040&Contr</pre>			
		olKey=CK66&MainWorkCenter=BP_ST			
	-	1&OperationEquipment=10000239			
MyNotificationHeaders	NotificationDescription	<pre>samclient://create/ MyNotificationHeaders?</pre>			
	NotificationType	NotificationType=M1			
	HeaderFunctionLocation				
	HeaderEquipment				
	Priority				
CatsTimesheets	AttendanceType	samclient://create/			
	ActivityType	CatsTimesheets? AttendanceType=0103&ActivityTyp e=T001&OrderId=1892368			
	MyWorkOrderOpera- tions MyWorkOrderSubOper- ations MyNotificationHeaders	Crocer DescriptionPlanningPlantOrder TypePriorityBusinessAreaMainWorkCenterMainWorkCenterPlantHeaderFunctionLocationHeaderEquipmentMyWorkOrderOpera- tionsMyWorkOrderSubOper ationsMyWorkOrderSubOper ationsMyWorkOrderSubOper ationsMyWorkOrderSubOper ationsMyWorkOrderSubOper ationsMyNotificationHeadersMyNotificationHeadersMyNotificationHeadersMotificationType HeaderFunctionLocation DperationType HeaderEquipmentMyNotificationHeadersMyNotificationHeadersCatsTimesheetsAttendanceType			

Object	Entity Set Name	Supported Parameters	Example		
Confirmation	Confirmations	VarianceReason AccountingIndicator ActivityType OrderID	<pre>samclient://create/ Confirmations? VarianceReason=0004&AccountingI ndicator=03&ActivityType=T001&O rderID=1892368&Operation=0002&P ostingDate=166730849</pre>		
		PostingDate			
Add part	MyWorkOrderCompo- nents OperationNo		samclient://create/ MyWorkOrderComponents		
		TextTypeDesc			
		ItemCategory			
		Plant			
		QuantityUnE			
		StorageLocation			
		MaterialNum			
		UnitOfEntry			
Issue part	MaterialDocuments	Plant	samclient://create/ MaterialDocuments?		
		ItemCategory	Plant=0001&ItemCategory=L&Stora geLocation=0001&MaterialNum=ST5		
		StorageLocation	1_R5181&QuantityUnE=4&Withdrawn		
		MaterialNum	Quantity=0&UnitOfEntry=eur		
		QuantityUnE			
		WithdrawnQuantity			
		UnitOfEntry			

Update Action

- Schema with single key and without parameters: samclient://update/<entitysetName>/<id>
- Schema with single key and with parameters: samclient://update/<entitysetName>/<id>? <parameterName1>=<parameterValue1>&<parameterName2>=<parameterValue2>...
- Schema with complex key and without parameters: samclient://update/<entitysetName>/<keyName1>='<keyValue1>',<keyName2>='<keyValue2>'
- Schema with complex key and with parameters: samclient:// update/<entitysetName>/<keyName1>='<keyValue1>',<keyName2>='<keyValue2>'?
 <parameterName1>=<parameterValue1>&<parameterName2>=<parameterValue2>..

Following is a list of all objects supported for the create action (entitysetName, list of supported parameters). Underneath each object is a deep link example:

Update	Action	Ob	iects
opulate	/ (011011	00	10013

Object	Entity Set Name	Supported Parameters	Example
Work order	MyWorkOrderHeaders	OrderDescription Priority	samclient://update/ MyWorkOrderHeaders/4090814
		BusinessArea	
		MainWorkCenter	
		MainWorkCenterPlant	
		HeaderFunctionLocation	
		HeaderEquipment	
Operation	MyWorkOrderOpera- tions	OperationShortText OperationFunctionLocation OperationEquipment	<pre>samclient://update/ MyWorkOrderOperations/ OrderId='4000960',OperationNo='0 180'</pre>
Suboperation	MyWorkOrderSubOper- ations	OperationShortText OperationFunctionLocation OperationEquipment	<pre>samclient://update/ MyWorkOrderSubOperations/ OrderId='4006511',OperationNo='0 010',SubOperationNo='0011'? OperationFunctionLocation=1111-2 22- AA-33&OperationEquipment=1006864 5&OperationShortText=data</pre>
Notification	MyNotificationHeaders	NotificationDescription HeaderFunctionLocation HeaderEquipment Priority	<pre>samclient://update/ MyNotificationHeaders/10000165? HeaderFunctionLocation=1111-222- AA-33&HeaderEquipment=10068645</pre>
Timesheet	CatsTimesheets	AttendanceType ActivityType OrderId	<pre>samclient://update/ CatsTimesheets/ lodata_sys_eid=X'F31C6D92276D427 F8D6607C05179944B00000000'? ActivityType=TRAVEL&OrderId=4008 338</pre>
Confirmation	Confirmations	VarianceReason AccountingIndicator ActivityType	samclient://update/

Object	Entity Set Name	Supported Parameters	Example		
Add part	MyWorkOrderCompo- nents	Orderld	samclient://update/		
		QuantityUnE			
		StorageLocation			
		MaterialNum			
		UnitOfEntry			

View Action

- Schema to view list screen: samclient://view/<entitysetName>
- Schema to view details screen: samclient://view/<entitysetName>/<id> Or samclient://view/<entitysetName>/<keyNamel>='<keyValuel>',<keyName2>='<keyValue2>'

Following is a list of all objects supported for the create action (entitysetName, list of supported parameters). Underneath each object is a deep link example:

Object	Entity Set Name	Supported Parameters	Example
Work order	MyWorkOrderHeaders		samclient://view/ MyWorkOrderHeaders/4007187
Operation	MyWorkOrderOpera- tions		<pre>samclient://view/ MyWorkOrderOperations/ OrderId='4008338',OperationNo='0 010'</pre>
Suboperation	MyWorkOrdeSubOper- ations		<pre>samclient://view/ MyWorkOrderSubOperations/ OrderId='4008337',OperationNo='0 010',SubOperationNo='L001'</pre>
Notification	MyNotificationHeaders		samclient://view/ MyNotificationHeaders/10020862
Equipment	MyEquipments		samclient://view/ MyFunctionalLocations/FLOC-SVB- AN-07
Functional loca- tion	MyFunctionalLocations		samclient://view/MyEquipments/ 10038476

View Action Objects

14 Data Distribution Model Overview

A data distribution model defines how and what back end data are downloaded to the mobile devices.

Data distribution models consider various factors when determining what backend data should be downloaded to the mobile client and to the mobile user. Some common criteria are:

- Relevant business processes and business rules
- User business roles in the organization
- Last mobile client synchronization time with the back-end system
- Backend data changes and the time of the changes
- Current state of data objects on the mobile device

For the initial synchronization from the mobile device to the back-end system, the first two bullet points are considered when determining what data should be downloaded to the mobile device and for the requesting user. For subsequent delta synchronizations from the mobile device to the back-end system, all bullet points are considered when determining what data should be downloaded to the mobile device for the requesting user.

The following data distribution models are supported for the SAP Service and Asset Manager application:

OMDO Filters
 Ohio et data activation entirale desarde en OMDO fi

Object data collection entirely depends on *OMDO* filter conditions.

- Dependency Queue
 Object data collection entirely depends on Dependency Queue objects, and no filter conditions are applied for the fetch criteria.
- Dependency Queue + OMDO DOF Filters
 Object data collection is based on dependency queue objects, and the OMDO DOF filters are applied for the result set.
- Other (Custom BAdl)

You can implement your own distribution logic using a BAdl.

* Mobile Application:	SAMEQUIPMENT SAP Asset Manager /MERP/CL_PM_EQUIPMEN	IT_OD : oM	IDO H 🗸					*Des	cription: Equipment	
General Setting Technical Model Info	Data Filter Field S	election	Change Detect	ion Depe	ndent Object	Transactio	on Settings	Outbound Trigger As	signment	
Defined Filters		*	Rule Editor							
Operation - READ Operation - READ	-		Operat	tion: READ				Filter Name:	OBJECT_DISTRIBUTIO	N_MODE
F OBJECT_DISTRIBUTION_MODE*			Object Na	me: /MERP/	CORE_OMDO_	DISTR_ST		Reference Field Name:	GEN_ASGMNT_TYPE	
El Data Segment El Standard Filter			Data Filter Rule H	Key: SAM	EQUIPMENT.F	READ.OBJEC	T_DISTRIBU	JTION_MODE		
			Filter Rule Ty	ype: Static V	alue in Range T	able Format	\sim			
			Enter Rang	e Value						
			Sign: I	nclusive 🗸	Option: =		~			
			Low Value: 1	- OMDO Filte	r		\sim			
			High Value:				յնդ			
			Active Flag:							
				1 - OMDO Filte						
			Dulo Lief	2 - Dependenc	y Queue y Queue + oMD					
				9 - Free Searcl	-	O DOF IIIters			Active Flag	
				Z - Other	-				v	
			00002	RANGE	2		_		✓	E
										.

By default, the SAP Service and Asset Manager application determines object data collection based on distribution model by using *OMDO* filters. In some cases, both *OMDO* filters and *Dependency Queue* are used depending on the business use case. You can choose the appropriate distribution model based on your specific business processes and requirements.

To change the data distribution model for a particular *OMDO* object, complete the steps below:

- On the ConfigPanel home page, choose OData Mobile Data Object Configuration. Make sure you select your desired mobile application in the Mobile Application Filter field at the top of the page.
- 2. From the OData Mobile Data Object List select the desired OMDO object, such as SAM2310_EQUIPMENT, and then click on the Data Filter tab.
- 3. Expand the Defined Filters list under Depration READ Data Distribution
 OBJECT_DISTRIBUTION_MODE Choose the Change button from the menu.
- 4. Set the distribution model.
- 5. Save your changes.

14.1 Data Distribution by Assignment Types

By default, the SAP Service and Asset Manager application determines the assignment of work orders and notifications using the personnel number assignment at header level. However, implementation environments in different industries or business types may use a different assignment model from the default to determine the proper technician assignment for work orders and notifications. The SAP Service and Asset Manager application supports several assignment models; you only need to change the assignment type configuration for the specific model.

See Business Object Distribution by Assignment Model [page 152] for more details about assignment model distribution, and how to change assignment type for both work order and notification.

14.2 Common Filters for SAP Service and Asset Manager

The filters listed in the following table are common to all SAP Service and Asset Manager distribution rules. See the specific rules for details on filter requirements for those rules.

Common Filters: Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution, Mandatory	See specific rule for value	Defines which distribution model is used
COMP_CODE	Data Distribution, Optional	Any	Restricts work order distribution based on the maintenance plant company code on the work order.
CO_AREA	Data Distribution, Optional	Any	Restricts work order distribution based on work order maintenance plant controlling area.
DATE_CLOSE	Standard Filter, Optional	Any	Restricts work order distribution based on date range within which work order has been closed.
DATE_COMPLETION	Standard Filter, Optional	Any	Restricts work order distribution based on date range within which work order has been technically completed.
DATE_RELEASE	Standard Filter, Optional	Any	Restricts work order distribution based on date range within which work order has been released
ORDER_CATG	Data Distribution, Optional	See specific rule for value	Restricts work order distribution based on work order category. For maintenance orders, it should be value 30.
ORDER_TYPE	Data Distribution, Optional	Any	Restricts work order distribution based on work order type.
ORDERID	Data Distribution, Optional	Any	Restricts work order distribution to a specific work order number.
OPER_ACTTYPE	Standard Filter, Optional	Any	Restricts work order distribution based on work order operation level activity type.
OPER_CONTROL_KEY	Standard Filter, Optional	Any	Restricts work order distribution based on the operation level control key on the work order.

Common Filters: Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
OPER_EXCL_SYST_STAT	Standard Filter, Optional	Any	Restricts work order distribution by excluding work orders with opera- tions that have a specified system status code.
OPER_EXCL_USER_STAT	Standard Filter, Optional	Any	Restricts work order distribution by excluding work orders with opera- tions that have a specified user sta- tus code.
OPER_INCL_SYST_STAT	Standard Filter, Optional	Any	Restricts work order distribution by requiring work order operations with a specified system status code.
OPER_INCL_USER_STAT	Standard Filter, Optional	Any	Restricts work order distribution by requiring work order operations with a specified user status code.
OPER_PLANT	Standard Filter, Optional	Any	Restricts work order distribution based on the operation level plant of the work order.
PLANNER_GROUP	Data Distribution, Optional	Any	Restricts work order distribution based on the header planner group of the work order.
PLANNING_PLANT	Data Distribution, Optional	Any	Restricts work order distribution based on the work order header planning plant.
PLANT	Data Distribution, Optional	Any	Restricts work order distribution based on the header maintenance plant of the work order.
PM_PHASE	Data Distribution, Optional	Any	Restricts work order distribution based on the maintenance process phase of the work order.
WO_EXCL_SYST_STAT	Standard Filter, Optional	Any	Restricts work order distribution by excluding work orders header with a specified system status code.
WO_INCL_SYST_STAT	Standard Filter, Optional	Any	Restricts work order distribution by requiring a work order header with a specified system status code.
WO_EXCL_USER_STAT	Standard Filter, Optional	Any	Restricts work order distribution by excluding a work order header with a specified user status code.
WO_INCL_USER_STAT	Standard Filter, Optional	Any	Restricts work order distribution by requiring a work order header with a specified user status code.
MAIN_WORK_CENTER	Data Distribution, Optional	Any	Restricts work order distribution based on the work order header work center.

Filter Name	Туре	Value	Comments
DOC_GOS_RELTYPE	Standard Filter, Optional	Data Segment, Op- tional	Determines whether the GOS at- tachment is supported based on a GOS relationship.
DMS_DOC_TYPE	Standard Filter, Optional	Data Segment, Op- tional	Determines whether the DMS at- tachment is supported based on the DMS document type.
DOC_LINK_OBJ	Standard Filter, Optional	Data Segment, Op- tional	Determines whether the DMS at- tachment is supported based on the linked SAP object.

14.3 User Parameter IDs

User Parameter IDs are used to filter data that mobile users download when they perform a sync. By setting the Parameter IDs for users, you can define which assignment types technicians will receive and which activities they have to complete on their mobile devices. To update these IDs in your user profile, perform the following steps:

- 1. Use the transaction code SU3 on the SAP GUI.
- 2. Select the Parameters tab.
- 3. In the list of parameters you can add a new row or modify/delete existing ones.

(i) Note

- To display other users' Parameter IDs, use the transaction code SU01D on the SAP GUI.
- You need authorization to edit the list of User Parameter IDs for other users.

List of User Parameter IDs

The following table lists all User Parameter ID values available in SAP Service and Asset Manager:

User Parameter ID	Description
AGR	Work center
SWK	Maintenance plant
VAP	Main work center for maintenance tasks
WRK	Plant
IWK	Maintenance planning plant
CAC	Controlling area
IHG	Maintenance planner group

User Parameter ID	Description
KOS	Cost Center
LAG	Storage location
PBR	Personnel Area
RVK	Reference sales organization

③ Note

For more information about which assignment types require User Parameter IDs, see:

- Work Order Assignment Type Options [page 153]
- Notification Assignment Options [page 154]

14.4 Work Order Distribution Rules

The standard SAP Service and Asset Manager application work order distribution is controlled by the OMDO (OData mobile data object) **SAM2310_WORK_ORDER_GENERIC** *READ* operation. It supports several data distribution models for the work order.

You can choose the appropriate distribution model based on your specific business processes and requirements.

14.4.1 Distribution by Work Order Header Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Header Person Responsible:

- Mobile user has an employee number (personnel number) assigned in SAP
- Employee number is assigned to the work order header as the person responsible
- Work order has been released
- Work order has not been marked for deletion

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	1	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, it should be value 30.

14.4.2 Distribution by Work Order Operation Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Header Person Responsible:

- Mobile user (i.e., the technician) must have an employee number (personnel number) assigned in SAP
- Employee number is assigned to the work order operation as the person responsible
- Work order is released
- Work order is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	2	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.3 Distribution by Work Order Suboperation Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Suboperation Person Responsible:

- Mobile user (i.e., the technician) must have an employee number (personnel number) assigned in SAP
- Employee number is assigned to the work order suboperation as the person responsible
- Work order is released
- Work order is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	3	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.4 Distribution by Capacity Requirement Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Capacity Requirement Person Responsible:

- Mobile user (i.e., the technician) must have an employee number (personnel number) assigned in SAP
- Employee number is assigned to the work order capacity requirement split records as the person responsible
- Work order is released
- Work order is not marked for deletion

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	4	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.5 Distribution by Work Order Header Planner Group

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Header Planner Group:

- Mobile user (i.e., the technician) has been assigned to the planner group based on the business
- Employee number is not required
- Planner group associated with the mobile user is assigned to the work order header
- Work order is released
- Work order is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	5	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.6 Distribution by Work Order Operation Work Center

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Operation Work Center:

- Mobile user (i.e., the technician) has been associated with a work center in business
- Employee number is not required
- Work center associated with the mobile user is assigned to work order operation
- Work order has been released
- Work order has not been marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	6	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.7 Distribution by Work Order Header Business Partner

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Header Business Partner:

- Predefined partner function is used in work order for work assignment
- Employee number is not required
- By default, the SAP user ID for the mobile user is used for data distribution by partner function
- Work order is released
- Work order is not marked for deletion

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	7	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be 30.

14.4.8 Distribution by Work Order Header Work Center

Requirements

The following are requirements before configuring the distribution model for Distribution by Work Order Header Work Center:

- Mobile user (i.e., technician) has been associated with a work center based on the business
- Employee number is not required
- Work center associated with the mobile user is assigned to the work order header
- Work order is released
- Work order is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	8	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.9 Distribution through MRS Scheduling Engine

Requirements

The following are requirements before configuring the distribution model for Distribution through MRS Scheduling Engine:

- MRS has been implemented in the SAP system, and is responsible to schedule and update work order capacity records with the assigned technician
- Employee number is required for the mobile user
- Work order is released
- Work order is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	A	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.4.10 Distribution by Free Search

Requirements

The following are requirements before configuring the distribution model for Distribution by Free Search:

- Free search criteria for the work order. Used for an OnDemand work order look-up scenario.
- Employee number is not required
- Work order is released
- Work order is not marked for deletion

Filter Name	Туре	Value	Comments
WO_ASSIGNMENT_TYPE	Data Distribution Mandatory	7	Defines which distribution model is used
ORDER_CATG	Data Distribution Optional	30	Restricts work order distribution based on work order category. For maintenance orders, value should be <i>30</i> .

14.5 Notification Distribution Rules

The OMDO (OData mobile data object) **SAM2310_NOTIF_ASSIGNMENT_TYPE** *READ* operation controls the standard SAP Service and Asset Manager application notification distribution. It supports several data distribution models for the notification.

You can choose the appropriate distribution model based on your specific business processes and requirements.

Notification requests are assigned to the technician directly or assigned through the work center, planner group, or related business partner of the technician. The SAP Service and Asset Manager application supports these different assignment types while downloading notifications associated with the technician.

Valid assignment types are:

- **1 Header Level Person Responsible:** Assign this notification to the HR personnel number of the technician through the notification header *Partner* section.
- 2 Notification Task Level Personnel Number: Assign this notification to the HR personnel number of the technician through individual Task Personnel Number field.
- **3 Header Level Planner Group:** Assign this notification to the planner group associated with the technician through the header level *Planner Group* field.
- **4 Header Level Business Partner:** Assign this notification to the business partner associated with the technician through header level *Partner Function Maintenance*. The business partner can be anyone related to the notification partner function and associated with the technician, such as user responsible, sold-to-party, or other party. If there is no MAM configuration set up for the user, the default configuration uses *VU-User Responsible* as the default partner function and the technician *SAP User ID* as the partner number.
- **5 Header Level Work Center:** Assign this notification to the work center associated with the technician through the header level *Work Center* field.
- **D Dependency Queue:** Enables the dependency queue from the work order. When active, all notifications associated with a work order are downloaded, as well as qualifying data based on additional distribution rules that are set.

Customers can choose the appropriate distribution model based on their specific business processes and requirements.

14.5.1 Distribution by Notification Header Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Notification header Person Responsible:

- Technician has an employee number (personnel number) assigned in SAP
- Employee number is assigned to the notification header partner overview as the person responsible
- Notification is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	1	Defines which distribution model is
	Mandatory		used

14.5.2 Distribution by Notification Task Level Person Responsible

Requirements

The following are requirements before configuring the distribution model for Distribution by Notification task level Personal Responsible:

- Technician has an employee number (personnel number) assigned in SAP
- Employee number is assigned to the notification task Person Responsible field
- Notification is not marked for deletion

Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	2	Defines which distribution model is
	Mandatory		used

14.5.3 Distribution by Notification Header Level Planner Group

Requirements

The following are requirements before configuring the distribution model for Distribution by Notification header level Planner Group:

- Technician is assigned to the planner group based on the business
- Employee number is not required
- Planner group associated with the mobile user is assigned to the notification header
- Notification is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	3	Defines which distribution model is
	Mandatory		used

14.5.4 Distribution by Notification Header Level Business Partner

Requirements

The following are requirements before configuring the distribution model for Distribution by Notification header level Business Partner:

- Business partner is assigned to the notification header partner overview
- The SAP user ID of the mobile user is used for data distribution by partner function using User Responsible

- Employee number is not required
- Notification is not marked for deletion

Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	4	Defines which distribution model is
	Mandatory		used

14.5.5 Distribution by Notification Header Level Work Center

Requirements

The following are requirements before configuring the distribution model for Distribution by Notification header level Work Center:

- Technician is associated with a work center in business
- Employee number is not required
- Work center associated with the mobile user is assigned to the notification header
- Notification is not marked for deletion

Back End Data Filter Matrix

Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	5	Defines which distribution model is
	Mandatory		used

14.5.6 Distribution by Free Search - Notifications

Requirements

The following are requirements before configuring the distribution model for Distribution by Free Search:

• Free search for notification used for an on-demand notification look-up scenario

- Employee number is not required
- Notification is not marked for deletion

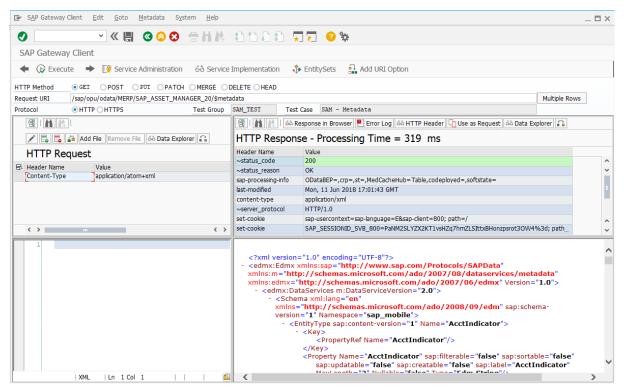
Filter Name	Туре	Value	Comments
NOTIF_ASSIGNMENT_TYPE	Data Distribution	9	Defines which distribution model is
	Mandatory		used

15 Troubleshooting

This section describes the various troubleshooting activities that you can perform in error situations, or the app users can perform on a regular basis to ensure the smooth running of the mobile application. It is also explains how to monitor the different components of SAP Gateway, how to use the logs, and how to carry out maintenance activities.

15.1 SAP Gateway Client

You can use the SAP Gateway Client (transaction code: /*IWFND/GW_CLIENT*) to test your OData service provider without an OData consumer, such as the SAP Service and Asset Manager mobile client. This tool is especially useful to test your OData service from the back end to identify service-related issues before a service is used by the mobile application.



For more information about how to work with the SAP Gateway Client, see SAP Gateway Client in the SAP Gateway Technical Operations Guide.

15.2 SAP Gateway Error Logs

Error logs provide detailed context information about errors that have occurred at runtime, enabling you to perform root cause analysis, as well as reproducing and correcting errors.

You can launch the error log with transaction /*IWFND/ERROR_LOG* in Gateway Hub systems. Launch the error log with transaction /*IWBEP/ERROR_LOG* in your back-end system.

The SAP Gateway error logs reveal basic details about errors and show errors from all users for a given client. Business logic errors are often displayed in this error log due to improper business logic. Other errors displayed include the HTTP code to indicate the type of error.

Note that based on the security level setting, advanced details or the replay function may be hidden or disabled. Note also that these error logs will not show generic authorization errors if users fail to properly authenticate.

SA	P Gateway: Error Log	
6	🚺 🔄 Re-Select	
		👔 📳 🍋 Érror Context 🐘 Active Source 🗟 Download to PC 🗟 Upload from PC 📴 Summarize Logs
(Dverview	
₽	Line Entry Date Time User 5 1 11.06.2018 10:44:42 ME	T100 E., T100 Err., ICF N., HTT., B Error Text Comp., Package Names., Service Name /INNBE, 7 2 oddta 400 G/No mobile application is assigned to odata service /MERP/SAP_ASSET OPU/INVFND., /MERP/ SAP_ASSET_MANAGER_20
	4 2 05:25:36 HU	
		/IWFN 7 1 odata 202 🗸 Rejected because of error during changeset processing OPU., /IWFND, /MERP/ SAP_ASSET_MANAGER_20
		/IWBE 1 odata V Business error: Type =E Id =IM No =002 Message =Functional locatio OPU //WFND //MERP/ SAP_ASSET_MANAGER_2/
		/IWFN 👔 1 odata 202 🗸 Rejected because of error during changeset processing OPU / IWFND /MERP/ SAP_ASSET_MANAGER_2(
		(*)
G		ymat 🖧 Call Stack 🦰 Application Log 🖧 Request Data 🖌 🖧 Response Data 🦼 🕀 Backend Monitor 🕨 Replay 🖌 🕨 Configuration 🖌
	or Context	unacilier an parcilie Laboratoria caliler redact acar al contrabone para al Contrana Laborati in Laborati al Contrabone acar al contrabone para
	Name	Value
	ERROR_CONTEXT	Value
	ERROR INFO	No mobile application is assigned to odata service /MERP/SAP_ASSET_MANAGER_20 version 0001.
m	ERROR_RESOLUTION	
	SAP_NOTE	See SAP Note 1797736 for error analysis
	LINK_TO_SAP_NOTE	https://service.sap.com/sap/support/notes/1797736
T)	/IWFND/CX_MGW_BUSI_EXCEPTION	
	REMOTE_MESSAGE	
	REMOTE_SYSTEM	
	REMOTE_MESSAGE_TYPE	
	ENTITYSET_NAME	
	MESSAGE	
	OPERATION	
E	SERVICE_INFO	
	NAMESPACE	/MERP/
	SERVICE_NAME	SAP_ASSET_MANAGER_20
	VERSION	0001
	SYSTEM_ALIAS	SVB_800
	DESTINATION	NONE
E	SYSTEM_INFO	
	REQUEST_URI	/sap/opu/odata/MERP/SAP_ASSET_MANAGER_20/MobileClientSynchronizationSessions?\$format=json&\$top=5
	REMOTE_ADDRESS	10.97.66.248
	APPLICATION_SERVER	ldcisvb_SVB_00
	HUB_VERSION_INFO	SVB/800, Rel. 7.51, SAP_GWFND SP01, GWHUB Version 017
	BEP_VERSION_INFO	not yet available

You can navigate to different sections from the *Error Context* area as shown above. Choose *Replay* to reproduce and correct errors. Choose from the following two replay options:

- SAP Gateway Client
- Web Browser

Use option SAP Gateway Client to reproduce runtime situations that led to a particular error without accessing the application from the actual mobile client, and to simulate a service at runtime to identify and resolve potential issues.

For more information about how to configure the error log, see Configuration Settings for the Error Log in the SAP Gateway Technical Operations Guide.

In addition, use the *Application Log Viewer* to display more technical error details by using transaction / *IWFND/APPS_LOG*.

15.3 SAP Gateway Statistics

You can use the SAP Gateway Statistics (transaction code: /*IWFND/STATS*) to display the request statistics and aggregated statistics. Each successful OData request has an entry in the statistics records, which is kept for 7 days by default, however, you can extend the period to 30 days. Request statistics can be aggregated, in which case they are kept for 90 days by default, however, you can extend the period to 365 days.

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		and the second tests		🔟 👓 Request t	IKI 🔤 Summarize 🗠	Performance Trac	B OO HUD S	stem Statis	ICS OO E	sackend Sys	tem Statisti	CS							
R	Request	t Statistic	5																
₿		Ex Namespa	Service Name	V Operation		Batch Operations	Processing	Hub Ove	RFC O	Backend	Applicati			Paralleliz	Sum of al	Request Si			No.
	1 800	/MERP/	SAP ASSET MANAGER 20	1 read feed	SAPUsers		212	136	0	17	59		72 %	0	59		334.416		6
	2	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed	107	50	0	8	49	0	54 %	0	46	297		mixed	
	4	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	315	118	0	20	177		44 %	0	173	1.117	73.339		
	9	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	258	126	0	17	115		55 %	0	112	846	254.331		2
	13	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	183	91	0	13	79	0	57 %	0	75	855	14.081	mixed	
	17	/MERP/	SAP ASSET MANAGER 20	1 read feed	MobileStatuses		3.757	595	0	55	3.107	0	17 %	0	3.107	0	4.482.684	json	2.3
	18	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	123	50	0	9	64	0	48 %	0	61	576	761	mixed	
	21	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	372	188	0	47	137	0	63 %	0	134	1.101	394.973	mixed	4
	26	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	541	283	0	89	169	0	69 %	0	162	591	1.013.083	mixed	7
	29	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	2.482	700	0	1.309	473	0	81 %	0	470	577	4.152.855	mixed	1.5
	32	/MERP/	SAP ASSET MANAGER 20	1 read feed	Geometries		1.233	49	0	6	1.178	0	4 %	0	1.178	0	17.323	json	
	33	/MERP/	SAP ASSET MANAGER 20	1 read feed	Documents		1.465	64	0	6	1.395	0	5 %	0	1.395	0	195.378	json	1
	34	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	344	174	0	27	143	0	58 %	0	140	1.394	340.310	mixed	3
	40	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	2.013	1.154	0	135	724	0	64 %	0	721	3.297	7.094.932	mixed	3.9
	53	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	486	210	0	33	243	0	50 %	0	239	2.510	436.737	mixed	2
	63	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	129	39	0	7	83	0	36 %	0	80	580	765	mixed	
	66	/MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	205	76	0	13	112	4	43 %	0	109	582	128.434	mixed	
	69	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	3.958	2.072	0	384	1.502	0	62 %	0	1.499	4.744	12.956.519	mixed	7.7
	87	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	648	197	0	61	390	0	40 %	0	387	3.644	140.046	mixed	
	101	MERP/	SAP ASSET MANAGER 20	1 batch		read feed/read f	1.752	871	0	161	720	0	59 %	0	717	8.093	1.763.108	mixed	3.6
	132	/MERP/	SAP ASSET MANAGER 20	1 metadata			253	249	0	1	3	0	99 %	0	3	0	559.537	xml	
	133	/MERP/	SAP ASSET MANAGER 20	1 metadata			3.373	747	0	2,621	5		0 %	0	5	0	559,537		

SAP Gateway Statistics aggregates the entries by various entities, for example, client, namespace, service name and version. With the */IWFND/STATS* transaction you can verify details, such as processing time, response size by entity, and other statistics about the complete request.

15.4 SAP Gateway Tracing Tools

The SAP Gateway provides tracing tools (transaction code: /IWFND/TRACES) to trace on a particular user for both performance and payload.

Performance trace enables you to monitor performance at service call level for both the SAP Business Suite and the SAP Gateway. Payload trace enables you to monitor the service calls with request and response data, and to replay and simulate the service calls without accessing the application from the mobile client.

Traces display detailed request and response data coming into the SAP Gateway. Traces are active for only a short time, and are purged on a regular basis.

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SAP Gateway: Tracing Tool	5								
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' 🔚 Users & Request URI Prefix • 🔚	Configuration Performance Trace Payload Trace								
	ତ୍ରା 🚊 🐨 🏹 🕞 , 왱크 🚱 ôà 📷 🔮 ôà Request URI 🛅 Today <	-> All Trace	5						
	Payload Trace:								
	Status Service Call Info	Method	Proc. Time	Appl. Time Non-G	N. Req. Size	Resp. Size	Format	Date	Time
	MERP/SAP_ASSET_MANAGER_20/SAPUsers?!deltatoken='6CAE8B77396E1E	GET	72	41	0 0	614	xml	05.06.2018	21:5
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	108	56	0 360	11.232	mixed	05.06.2018	21:5
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	132	73	0 1.369	3.436	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	110	64	0 1.035	2.577	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	147	70	0 1.044	19.415	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/MobileStatuses?!deltatoken='6CAE8B7739.	GET	106	72	0 0	644	xml	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	113	63	0 702	1.723	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	170	108	1 1.353	3.356	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	125	71	0 717	1.798	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	132	80	0 703	1.728	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/Geometries?!deltatoken='6CAE8B77396E1.	GET	88	54	0 0	624	xml	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/Documents?!deltatoken='6CAE8B77396E1.	GET	88	52	0 0	619	xml	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/Documents?!deltatoken='6CAE8B77396E1.	GET	0	0	0 0	0		05.06.2018	21:
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	150	86	0 1.709	4.325	mixed	05.06.2018	21:
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	519	416	0 4.053	10.368	mixed	05.06.2018	21:
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	249	165	0 3.077	7.921	mixed	05.06.2018	21:
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	178	77	0 706	84.712	mixed	05.06.2018	21:
	MERP/SAP_ASSET_MANAGER_20/\$batch	POST	1.272	836	0 708	2.722.215	mixed	05.06.2018	21:4
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	2.166	1.974	0 5.815	32.054	mixed	05.06.2018	21:4
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	1.032	756	0 4.463	81.225	mixed	05.06.2018	21:
	/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	696	461	0 9.651	103.371	mixed	05.06.2018	21:4
	/MERP/SAP ASSET MANAGER 20/\$metadata?sap-language=en	GET	318	2	0 0	559.537	xml	05.06.2018	21:4

With this tool, you can verify the exact content of the request header and body that is sent from the mobile device, and also check the response from the SAP Gateway.

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SAP Gatewa	y: Payload T	Trace				
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Client 80	0					
🗟 Date	Time I	User	Call Type	Method	Service Call Info	Transaction ID
05.06.2018	21:54:52		Request		/MERP/SAP_ASSET_MANAGER_20/SAPUsers?!deltatoken='6CAE8B7739	
05.06.2018	21:54:52		Response		/MERP/SAP_ASSET_MANAGER_20/SAPUsers?!deltatoken='6CAE8B7739_	4DD6EF3A032E0540E00
	on="1.0"?>					
 <feed xml:t<br="">xmlns:m="l</feed> <id>httl</id> <title li="" ty<=""> </th><td>http://sche
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ed>2018-06</td><td></td><td>title></td><td>/sap/op</td><td><pre>(sap/opu/odata/MERP/SAP_ASSET_MANAGER_20/" '08/dataservices/metadata"xmlss="http://www.w3. u/odata/MERP/SAP_ASSET_MANAGER_20/SAPUsers</pre></td><td></td></tr></tbody></table></title>						

For information about how to configure and activate the payload trace tool, see Tracing Tools: Configuration in the SAP Gateway Technical Operations Guide.

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