



PUBLIC

SAP Service and Asset Manager

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SAP Service and Asset Manager Application Product Overview

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1 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
6.0	NOV 2025	Original release of the <i>SAP Service and Asset Manager Application Product Overview</i> guide, version 2511.

2 SAP Service and Asset Manager Features and Personas Matrix

ⓘ Note

- Use the filter below to hide/show any columns.
- This table lists features specific to SAP Service and Asset Manager. For general MAIF configurations, refer to [MAIF Configuration Guide](#).

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Defense and Security Features	DE-FENSE_INT-GRATION	SAP Service and Asset Manager supports the following features for the Defense and Security industry: • Flight order • Support defense-related properties in Materials • NATO Stock Number (NSN) • Manufacturer Part Number (MPN) • Long Manufacturer Part Number (LMPN) • Condition codes • Master and critical equipment • Operational and technical status • Additional defense and security fields on supply docs and material master • Support edge mobile services	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2410		Defense and Security Features Configuration	Working with Defense and Security Features

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Meta-data Upgrade Tool	-	The SAP Service and Asset Manager Metadata Upgrade Tool is a cross-platform Electron application for upgrading and merging customized SAP Service and Asset Manager metadata with new out-of-box releases, with a focus on usability, transparency, and control.	-	-	2210	-	-	SAP Service and Asset Manager Metadata Upgrade Tool

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Delta Sync Optimization - Upload Only	CA_UPLOAD_ONLY	With the Upload Only feature, you can improve efficiency and optimize delta synchronization. This allows users to upload recorded transactions independently, without triggering an immediate download of delta data. Users may choose to upload transactions immediately after: • Completing a job • Completing all jobs for the day • Finishing their shift • Completing their daily or weekly work cycle	Maintenance Technician (Standard) Maintenance Technician (Pro) Maintenance Technician (External) Inventory Clerk	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Maintenance Technician (External): NO Inventory Clerk: NO	2505		Upload Only Configuration	Using the Upload Only Feature

Note

- Users can still initiate a full delta sync at any time to download the latest delta data.
- Please note that the Upload Only feature has specific characteristics and limitations regarding how data is synced between the back end and the mobile device. Before enabling this feature, we recommend reviewing *the current limitations*.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Split Assignment	-	With split assignment, you can work on multiple work orders or tasks simultaneously within the SAP Service and Asset Manager app. You are not limited to just one assignment. This approach promotes efficient team collaboration, ensures tasks are completed quickly, and provides flexibility in managing workload distribution.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2511		Work Order Operations Split Assignment for Maintenance Technician Persona	Split Assignment
Hierarchy Control	-	The hierarchical user interface control ensures a clear visual display of the selected nodes of parent and children when searching or navigating a node structure. When navigating this type of hierarchical node structures, users can tap on a parent node to expand and view their children, as well as to navigate up or down from that node location, opening or closing nodes as going through.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES	4.0		Hierarchy Control	Hierarchy Control Overview
FSM SAP Cloud Integration	-	SAP Service and Asset Manager supports integration with SAP S/4HANA and Field Service Management for Plant Maintenance Orders using SAP Cloud Integration (SCI) , requiring specific configuration. This integration is beneficial for streamlining maintenance processes and enhancing operational efficiency.	Field Service Technician (Pro)	Field Service Technician (Pro): NO	2511		FSM SAP Cloud Integration	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Field Logistics features	-	The Field Logistics persona supports the following functions: - Managing logistics for stock, non-stock, and supplier items. - Receiving items at remote plants, including containers, delivery items, handling units, and package items. - Downloading voyages and set them to arrive. - Scanning QR-codes for containers, handling units, delivery items, and voyage numbers.	Field Logistics	-	2505		Field Logistics Configuration	SAP Service and Asset Manager User Guide - Field Logistics Persona

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP			Link to Configuration Guide	Link to User Guide
						Availa-ble	S/4HA NA back end			
Confirmation Scenarios	PM_CO NFIR-MAT-ION_SC ENAR-IOS	When working with an Operation or Suboperation on a Work Order, SAP Service and Asset Manager supports the following confirmation scenarios to help technicians quickly apply confirmations via a dynamic QR code. Both scenarios require two users with devices to add the confirmation to the object. • Verification: In this confirmation scenario, a maintenance technician requests another maintenance technician who has appropriate authorization to review and confirm that a job has been correctly performed. • Cooperation: In this confirmation scenario, the main technician records the work performed by another technician in a supportive role using the QR code generated by that technician.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2511				Confirmation Scenarios Configuration	Working with Confirmation Scenarios
 Note Depending on your configuration, you can also print out static QR codes for technicians to scan.										

						Mini- mum re- quired SAP		
Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Availa- ble from version	S/4HA NA back end	Link to Config- uration Guide	Link to User Guide
Ex- tended Ware- house Clerk fea- tures	EWM_C ORE_D ATA	The Extended Warehouse Clerk per- sona supports the following func- tions: - Managing and optimizing stor- age bins - Goods movements - Managing physical inventory - Planning and Monitoring goods movements and warehouse stocks - Warehouse Control - Inbound Delivery and Inbound Delivery Items	Extended Warehouse Clerk	-	2505	SAP S/4HA NA 2022 FPS00	Ex- tended Ware- house Clerk Config- uration	SAP Service and As- set Man- ager User Guide - Ex- tended Ware- house Clerk

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
In-bound Delivery Process (Extended Warehouse Clerk)	-	As an Extended Warehouse Clerk, you can search, fetch, and download Inbound Deliveries and Inbound Delivery Document Items, to view all the relevant delivery details and statuses, as well as to manage and execute tasks accurately during the receiving process. Key features of the inbound delivery process include: • Change Inbound Delivery documents (with single edits or bulk edits) • Create Warehouse Tasks (both manual and auto-creation) • Pack Inbound Delivery Items (single and mixed Handling Units creation, auto packing) • Goods Receipt (single item and bulk items receiving)	Extended Warehouse Clerk	Extended Warehouse Clerk: YES	2511	SAP S/4HANA 2022 FPS00	In-bound Delivery Process Configuration (Extended Warehouse Clerk)	Working with In-bound Deliveries
 Note The Inbound Delivery feature differs for the Inventory Clerk and Extended Warehouse Clerk personas, since Inventory Clerk only supports Goods Receipt for Inbound Delivery.								

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Mobile Configuration Variant Tool	-	With the Mobile Configuration Variant Tool, you can create Configuration Variants and assign them to mobile application users in your organization. A Configuration Variant is a configuration object created based on an existing mobile application configuration. It contains a collection of override configuration changes that can be applied to an existing mobile application configuration at runtime. By creating and assigning Configuration Variants to users, you can quickly apply specific configuration scenarios to different Business Units within your organization, without upgrading your application or creating a new instance of your base mobile application configuration.	Maintenance Technician (Standard) Maintenance Technician (Pro) Maintenance Technician (External) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Safety Technician	-	2.0		Mobile Configuration Variant Tool Overview	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Config-uration Guide	Link to User Guide
						S/4HA back end		
FSM Crowd Service Integration	FSM_CROWD_INTEGRATION	If you are using SAP Field Service Management Crowd Workforce for external technicians, you can use SAP Service and Asset Manager to download Service Orders assigned to these external technicians via the FSM Planning and Dispatching Board.	Maintenance Technician (External) Field Service Technician (External)	Maintenance Technician (External): YES Field Service Technician (External): YES	2505		FSM Crowd Service Configuration	-

Note

This feature is specifically created for external workers within your organization, and supported by the **External** Maintenance and Field Service Technician personas. For more information, see:

- [Mobile User Essential Authorizations](#)
- [Configuring FSM Crowd Service - Back End - Enabling the Feature](#)
- [Maintenance Technician Persona Overview \(Standard, Professional, External\) \[page 91\]](#)
- [Field Service Technician Persona Overview \(Standard, Professional, External\) \[page 92\]](#)

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
FSM Crew Integration	FSM_CREW_MGMT	With the FSM Crew integration, technicians can perform the following activities, depending on their assigned role (Crew <i>Lead</i> or <i>Member</i>): - Access their crew members' assigned Service Orders, Items, Operations from the SAP Service and Asset Manager Home-screen. - Access information about their crews, crew schedule and crew members. - In the SAP Service and Asset Manager application, Crew Leads can update the Service Orders' status by changing the mobile status to <i>Start</i>, <i>Travel</i>, <i>On-site</i> or <i>Complete</i>.	Field Service Technician (Standard) Field Service Technician (Pro)	Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2505		FSM Crew Configuration	Working with FSM Crew (S4)

Note

- The FSM Crew integration is **only** supported in the [SAP S/4HANA Service scenario](#).
- For the [Customer Service \(CS\) scenario](#), use the *Crew Management* feature.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
AI-Assisted Job Completion	CA_AI_JOB_COMPLETION	Technicians can complete their job (Work Order, Service Order, Operation or Suboperation) with voice input using natural language and AI, instead of manually entering data required for the completion. The following fields support filling using AI: Time Expense Milage Note Defect information	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2505		AI-Assisted Job Completion - Configuration	Using AI to Complete Your Job

Note

- For Notifications, only the creation of the Notification Item and all its dependencies (such as Cause, Part, Damage, etc.) is supported.
- This feature is in scope for the Maintenance Technician (Standard) persona. However, no applicable use case currently exists because this persona supports Notifications only and does not support Work Orders. As a result, the AI job completion flow is never triggered.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Mini-mum re-quired SAP	S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Work Approval	-	A Work Approval is used to control the work execution. Work Approvals ask for measures to ensure a safe environment for working on a technical system. In doing so, approvals are used to define certain rules or requirements that must be followed.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): YES Safety Technician: YES	2305			Work Approval Configuration	Work Approval Detail Screen

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
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. Smartform instances can be associated with the following objects: • Equipments • Functional Locations • Service Orders • Service Order Items	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2210		FSM Smartforms Configuration for Maintenance Technician	Smartforms Overview

Note

- The FSM Smartforms feature can be used by both [Customer Service](#) and [SAP S/4HANA](#) back end systems.
- FSM Smartforms can be configured for Maintenance Technician as well, and used in plant maintenance scenarios. In this case, FSM Smartforms will be attached to PM work order operations instead of CS and S/4 work orders. For more information, see [FSM Smartforms Configuration for Maintenance Technician](#).

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
FSM Smart-forms Template	-	Technicians can not only work with pre-attached Smartforms, but also add new ones to existing operations. They can create Smartforms from Templates and attach to the objects listed in Smartforms Overview .	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2505		FSM Smart-forms Configuration (Customer Service Back End) Configuring Persona (SAP S/4HANA NA Back End) FSM Smart-forms Configuration for Maintenance Technician	Adding Smart-forms to Objects
 Note The FSM Smartform Template feature is: • Applicable for both Customer Service and SAP S/4HANA back end systems. • Part of Field Service Technician Scheduling, no additional configuration steps are required. • Supported by the Maintenance Technician (Pro) persona, if it already has Field Service Management integration configured.								
Configurable Guided Workflow	CA_GUIDED_F LOW	Configurable guided workflow (CGW) defines the lifecycle of an object processed in your mobile app. Customers define a workflow for their specific persona and business needs. The mobile app then displays the custom workflow as a progress tracker.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2410		Guided Workflow Configuration	Using Guided Workflows

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Attachments	CA_ATTACHMENT	Attachment support on business objects (DMS/BDS/GOS)	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Safety Technician	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Inventory Clerk: YES Safety Technician: YES	2110		Attachments - Abstract Document Management	Working with Attachments - Maintenance Technician User Guide Working with Attachments - Field Service Technician User Guide Working with Attachments - Inventory Clerk User Guide

Note

Attachments for Inventory Clerk persona is supported from 2405.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Mini- mum re- quired SAP	S/4HA NA back end	Link to Config- uration Guide	Link to User Guide
Auto-Sync	CA_AU TO_SY NC	Back end administrators can configure the app to auto-sync. Auto-syncs occur automatically, with no input needed from the app user.	Maintenance Technician (Standard) Maintenance Technician (Pro) Maintenance Technician (External) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Extended Warehouse Clerk	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Maintenance Technician (External): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO Inventory Clerk: YES Extended Warehouse Clerk: YES	2210			Auto-Sync Configuration	Automatic Syncing - Maintenance Technician User Guide Automatic Syncing - Field Service Technician User Guide

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Bill of Materials	CA_BILL_OF_MATERIAL	Bill of Material for technical objects	Maintenance Technician (Pro) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Pro): YES	2310		See SAP Note 333401  for more information about Support Material BOM using equipment or functional location construction type.	Hierarchy Control Overview - Maintenance Technician User Guide Bill of Materials - Maintenance Technician User Guide

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Business Partners	CA_BU SI-NESS_PART-NER	Business partner details. Service orders, functional locations, and equipment can be linked to a business partner. Business partners are parties in which your company has a business interest. A business partner can be a customer, a prospect, a supplier, a competitor, or even an employee of your own company.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Safety Technician Extended Warehouse Clerk	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES Safety Technician: YES Safety Technician: YES Extended Warehouse Clerk: YES	2.0		Configuring the Creation of Technical Objects from a Template Distribution by Work Order Header Business Partner Distribution by Notification Header Level Business Partner	Working with Business Partners - Maintenance Technician User Guide Working with Business Partners - Field Service Technician User Guide
Catalog Profile	-	By configuring catalog profiles, the user will be able to view safety-related catalogs, as well as other ones defined according to their preference.	Safety Technician	Safety Technician: NO	2410		Catalog Profiles Configuration	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Classifications	CA_CL ASSIFI-CAT-ION	Classification and characteristics for technical objects. When you are managing a large number of objects, you can group these objects according to particular and logical features. The hierarchical structure of classifications enables you to find specific objects starting from one top object, moving to multiple, lower level objects.	Maintenance Technician (Pro) Field Service Technician (Pro)	Maintenance Technician (Pro): YES Field Service Technician (Pro): YES	2.0		Configuring the Creation of Technical Objects from a Template	Working with Classifications - Maintenance Technician User Guide Classifications - Field Service Technician User Guide
Core Data	CA_CORE_DATA	Core data including org structure, such as Plant, Work Center etc.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Safety Technician	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Inventory Clerk: YES Safety Technician: YES				

					Availa- ble from version	Mini- mum re- quired SAP S/4HA NA back end	Link to Config- uration Guide	Link to User Guide
Feature name	Feature ID	Feature description	Personas supported	Enabled by default				
Creat- ing Techni- cal Ob- jects	CA_CR EATE_T ECH_O BJECT	Create equipment and functional lo- cation.	Mainte- nance Tech- nician (Pro) Field Serv- ice Techni- cian (Pro)	Mainte- nance Tech- nician (Pro): YES Field Serv- ice Techni- cian (Pro): YES	2205		Creat- ing a Techni- cal Ob- ject Tem- plate Config- uring the Crea- tion of Techni- cal Ob- jects from a Tem- plate	Work- ing with Techni- cal Ob- jects - Mainte- nance Techni- cian User Guide Techni- cal Ob- jects Detail Screen - Field Service Techni- cian User Guide

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Crew Management	CA_CREW_MA_NAGEMENT	Crew Management is an optional component that allows supervisors and team leaders to manage their crew and vehicles with significantly lower cost and greater flexibility.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2.0		Enabling and Disabling Features Per User Through SAP Authorization	Crew Management Overview
 Note - The Crew Management component is only supported in the Customer Service (CS) scenario. - For the SAP S/4HANA Service scenario, use the <i>FSM Crew Integration</i>. - For the Field Service Technician Standard and Pro personas, standard Crew Management is supported only from 2505 version.								
Digital Signature	CA_DIGITAL_SIGNATURE	Digital signature for S/4. This feature performs a verification of work by digitally signing the work, using a user name and password.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2105		Digital Signature Overview	Adding a Signature - Maintenance Technician User Guide Adding a Signature - Field Service Technician User Guide

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP			Link to User Guide
						Availa-ble	S/4HA NA back end	Link to Config-uration Guide	
Samsung Knox Capture integration	-	On Samsung devices, users can scan QR codes by the Knox Capture integration, which will allow them to: - Scan a single QR code to navigate directly to an object's detail page. - Scan multiple QR codes at once to save/issue multiple objects. - Trigger the scanning function directly by pressing the Active or XCover keys on supported Samsung devices.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2410			Samsung Knox Capture Configuration	Using Samsung Knox Capture

Note

This feature is a third-party integration by Samsung. For more information and the list of supported devices, refer to the official [Samsung Knox documentation](#).

					Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Feature name	Feature ID	Feature description	Personas supported	Enabled by default				
SAP Dynamic Forms	CA_DY-NA-MIC_FORMS	SAP Service and Asset Manager supports SAP Dynamic Forms, an SAP Business Technology Platform application that allows you to design, deploy, and use basic and complex forms. Key functionalities include: - Support to create and edit form instances associated with the following business objects: - Work Orders - Notifications - Equipments - Functional locations - Work Permits - Isolation Certificates and Other Certificates - S/4 service system: - Service Orders - Service Items - Ability to create, edit and delete forms locally. While being offline, users can: - Open, complete and submit locally created forms. - Modify and save locally created and updated forms. - Delete an unsynced form. - Support for syncing forms on SAP BTP.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Safety Technician	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO Safety Technician: NO	2310	SAP Dynamic Forms Configuration for SAP Service and Asset Manager	Working with Dynamic Forms	

					Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Config-uration Guide	Link to User Guide
Feature name	Feature ID	Feature description	Personas supported	Enabled by default				
Editable Data Table (EDT)	-	Editable Data Table is an extension, letting users to enter multiple records quickly in a table format. These tables have different types of cells that can include types of plain text, a switch, a picker or a signature control.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Extended Warehouse Clerk	-	2310		Editable Data Table (EDT)	Working with Editable Data Tables (Maintenance Technician User Guide) Working with Editable Data Tables (Field Service Technician User Guide)

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Geographic Information System (GIS)	CA_GEOSPATIAL_INFOSERVICE	GIS support for ESRI ArcGIS and GEF.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Safety Technician	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Safety Technician: YES	2010		Geo-spatial Service Definitions	Maps Overview and Settings Options (Maintenance Technician User Guide) Maps Overview and Settings Options (Field Service Technician User Guide) Maps Overview and Settings Options (Safety Technician User Guide)

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Creating and Updating Geospatial Data	CA_GIS_ADD_EDIT	You can create and update geospatial data on the map.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES	3.0			Maps Overview and Settings Options (Maintenance Technician User Guide) Maps Overview and Settings Options (Field Service Technician User Guide)
Location Tracking	CA_LO-CAT-ION_UPDATE	This feature allows to track the Technicians' live location, so the Planner can identify the Technicians' proximity and provide options for the Scheduler to assign them urgent tasks or re-assign tasks to nearby Technicians.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2205		Location Tracking Configuration	Profile Settings Overview

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Notification History	CA_NO_HIS-TORY		Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Safety Technician	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): NO Field Service Technician (Pro): NO Safety Technician: YES				
Online Search	CA_ONLINE_SEARCH	Users can search online for <i>Functional Locations</i> and <i>Equipments</i> , allowing them to view, filter and optionally download more objects to their mobile device, in addition to the ones already downloaded. This way users have more visibility of ongoing tasks, not limited to the ones available only offline.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2405		Online Search Configuration	Using Online Search (Maintenance Technician User Guide) Using Online Search (Field Service Technician User Guide)

Note

Online search for *Work Orders* and *Notifications* is supported from version 2410. See *Online Search support for Work Orders and Notifications*.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Online Search support for Work Orders and Notifications	CA_ONLINE_SEARCH	As of version 2410, SAP Service and Asset Manager supports online search for Work Orders and Notifications. Note - Users can only download and assign Work Orders and Notifications. - For the Field Service Technician persona, this feature is supported on the Customer Service Back End system.	Maintenance Technician (Pro) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Pro): NO	2410		Refer to SAP note 3480308/E . Configuring Online Search - Work Orders and Notifications	Using Online Search (Maintenance Technician User Guide) Using Online Search (Field Service Technician User Guide)
PDF Service Report Generation	CA_SERVICEREPORT	You can generate service reports in PDF format. You can then attach the PDF reports to service orders or share them through email.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2205		Service Report Template Configuration	Completing a Service Order

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Signature Capture	CA_SIGNA-TURE_CAP-TURE	Signature (physical) capture as an image.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2010		Signature Control Configuration	Adding a Signature (Maintenance Technician User Guide) Adding a Signature (Field Service Technician User Guide)
Editing Technical Objects	CA_EDIT_TEC H_OBJECT	Support for editing existing Functional Location and Equipment.	Maintenance Technician (Pro) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Pro): NO	2410		Support for Editing Existing Technical Objects	Equipment Overview Functional Location Overview

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Minimum required SAP			
					Available from version	S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Technical Objects	CA_TE CH_OBJECT	Equipment and Functional Location Master Data.	Maintenance Technician (Standard)	Maintenance Technician (Standard): YES			Technical Objects Configuration	Technical Objects Detail Screen
			Maintenance Technician (Pro)	Maintenance Technician (Pro): YES				
			Field Service Technician (Standard)	Field Service Technician (Standard): YES				
			Field Service Technician (Pro)	Field Service Technician (Pro): YES				
			Safety Technician	Safety Technician: YES				
Work Order History	CA_WO _HISTORY		Maintenance Technician (Pro)	Maintenance Technician (Pro): YES				
			Field Service Technician (Standard)	Field Service Technician (Standard): NO				
			Field Service Technician (Pro)	Field Service Technician (Pro): NO				

Note

This feature controls if Functional Location and Equipment sections are visible in the mobile application.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Expense Reporting	CS_EX-PENSE-REPORT	Service Technicians can record expenses for reporting.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2205		Expense and Mileage Configuration	Working with Expenses and Mileage
Mileage Reporting	CS_MILEAGE-REPORT	Service Technicians can record mileage for reporting.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES	2205		Expense and Mileage Configuration	Working with Expenses and Mileage
Service Notifications	CS_NOTIFICATION	As part of the Customer Service component, you can view, create and edit Service Notifications.	Field Service Technician (Standard) Field Service Technician (Pro)	Field Service Technician (Standard): YES Field Service Technician (Pro): YES	3.0		Customer Service Notification Types Configuration	SAP Service and Asset Manager Overview Screen

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP			Link to User Guide
						Availa-ble	S/4HA NA back end	Link to Config-uration Guide	
Service Orders	CS_SE RVICE_ORDER	As part of the Customer Service component, you can view, create and edit Service Orders.	Field Service Technician (Standard) Field Service Technician (Pro)	Field Service Technician (Standard): YES Field Service Technician (Pro): YES	3.0			Customer Service Order Types Configuration	SAP Service and Asset Manager Overview Screen
EAM Checklist	EAM_C HECK-LIST	Checklists are needed in many EAM processes, especially inspections and maintenance. The EAM checklist feature allows association between a checklist and a work order or operation. This core feature is applicable for SAP S/4HANA back-end system.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2110			EAM Checklist Overview	Using Inspection Checklists

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end			Link to Configuration Guide	Link to User Guide
Emergency Work for Phase Model	EAM_MERGENCY_WORK	This feature supports emergency work in the reactive maintenance phase model. It allows you to skip phases and issue a work order or notification when a technician is authorized to create these items.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2405				Emergency or Minor Work (Phase Model Configuration) Emergency or Minor Work (Phase Model + Non-Phase Model Configuration) SAP note 348975  - Enable S/4HANA EAM Emergency Work for Phase Model	Emergency and Minor Work Notifications

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Config-uration Guide	Link to User Guide
						S/4HA NA back end		
Event Prioritization for Notifications	EAM_EVENT_PRIORITY_MATRIX	Event priority matrix for non-phase model.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2210			
Minor Work for Phase Model	EAM_MINOR_WORK	This feature helps to skip phases and issue a work order or notification when a technician is authorized to create one.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2305			
Phase Control Codes	EAM_PHASE_CONTROL	Support phase control codes for phase model orders and operations.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2305			-
Phase Model		Phase model process support. A phase-based maintenance process supports you in the maintenance of technical objects.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	2110			-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA back end	Link to Configuration Guide	Link to User Guide
Product Model Viewer Integration	EPD_VI SUALIZATION	Integrate with product model viewer for 3D AR visualization of assets.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2305		EPD Visualization Configuration	-
Field Operations Worker	FOW_R OUTE	Field Operations Worker capabilities, supporting technicians who perform asset inspections and checks with focus on measurement points and on smaller services and repairs. Use the Field Operations Worker (FOW) component to see the routes that you are assigned to.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2.0		Field Operations Worker Configuration	Field Operations Worker Add-On Component

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Config-uration Guide	Link to User Guide
						S/4HA NA back end		
FSM Scheduler Integration	FSM_SCHED_I NTE-GRAT ION	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.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2205		Field Service Management Scheduling - SAP Service and Asset Manager Integration (FSM configuration on a customer service back-end) Configuring Persona (FSM configuration on an S/4 Field Service Management back-end)	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
HR Time-sheet	HR_TI ME-SHEET	CATs time reporting functionalities. Note - If you are using CATS, the SAP HR module must be installed. - Maintenance Technician (Standard): Time can only be recorded against a Cost Center, WBS Element, or Network Activity. Work Orders are not supported. - Maintenance Technician (Professional): No such limitation; CATs timesheet entries can be made against Work Orders, Cost Centers, WBS Elements, and Network Activities.	Maintenance Technician (Standard) Maintenance Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO	1.0		CATS and PM Configuration Time Entries Configuration	Time Sheet Overview
ASPM Checklist	IAM_C HECK-LIST	Asset Strategy and Performance Management (ASPM) checklists are a type of assessment used for equipment. If an equipment has a mandatory checklist associated with it, when you click <i>End Work Order</i> , you are automatically taken to the <i>Checklist</i> screen to complete the checklist before you can fully complete your work order. A checklist can be composed of multiple choice questions or questions where you can enter free-form text.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	4.0		Configuring Checklist Parameters	Checklists
PdMS Indicators	IAM_IN DICA-TORS	Use Predictive Maintenance and Service (PdMS) equipment indicators that allow you to identify the health status of your equipment.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	3.0	-		PdMS Indicators

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Inventory Management Core Data	IM_CO RE_DA TA	-	Inventory Clerk	Inventory Clerk: YES	2110		Inventory Clerk Parameter Configuration	Inventory Clerk Persona Overview
Meter Management	ISU_METER_M ANA-GE-MENT	Meter Management capabilities allowing technicians to retrieve work orders assigned to them from the SAP system, and perform meter installation, meter removal or replacement, aperiodic readings, meter repair and plant maintenance.	Maintenance Technician (Pro) Field Service Technician (Pro)	Maintenance Technician (Pro): YES Field Service Technician (Pro): YES	2.0		Meter Management Configuration	Meters Overview (Maintenance Technician user guide) Meters Overview (Field Service Technician user guide)
 Note For the Field Service Technician persona, this feature is supported from version 2405.								
Goods Issue	MM_G OODS_ ISSUE	Goods issue for inventory management. For more information, see Goods Issue [page 96] .	Inventory Clerk	Inventory Clerk: YES	2110	-		Working with Goods Issues
Goods Receipt	MM_G OODS_ RE-CEIPT	Goods receipt for inventory management. For more information, see Goods Receipt [page 95] .	Inventory Clerk	Inventory Clerk: YES	2110	-		Working with Goods Receipts

					Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Feature name	Feature ID	Feature description	Personas supported	Enabled by default				
Material Master Data	MM_MATE-RIAL_D-ATA	You can enable the material data. The material master contains information on the materials that a company procures or produces, stores, and sells.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Extended Warehouse Clerk	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Inventory Clerk: YES Inventory Clerk: YES Extended Warehouse Management: YES	2205		Inventory Clerk Parameter Configuration	Working with Physical Inventory
Physical Inventory	MM_PHYSI-CAL_IN-VEN-TORY	Physical Inventory capabilities for inventory management. For more information, see Physical Inventory [page 97] .	Inventory Clerk	Inventory Clerk: YES	2210			Inventory Clerk Persona Overview
Production Order	MM_PRODUC-TION_ORDER	Product orders for inventory management. For more information, see Inventory Clerk Persona Overview [page 93] .	Inventory Clerk	Inventory Clerk: YES				

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Purchase Requisition	MM_PURCHASEREQUISITION	Purchase Requisition for inventory management. For more information, see Purchase Requisitions [page 98] .	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Inventory Clerk: YES	2305		Working with Purchase Requisition	
Stock Lookup	MM_STOCK_LOOKUP	Stock Lookup by plant and storage location. For more information, see Stock Lookup [page 97] .	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Field Service Technician (External) Inventory Clerk	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Field Service Technician (External): YES Inventory Clerk: YES	2205	Vehicle Stock Look Up Configuration	Working with Stock Lookup	
Stock Transfer	MM_STOCK_TRANSFER	Stock Transfer for inventory management. For more information, see Stock Transfers [page 96] .	Inventory Clerk	Inventory Clerk: YES	2110			

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Minimum re-required SAP			
					Available from version	S/4HANA back end	Link to Configuration Guide	Link to User Guide
Goods Issue for Planned Materials on Work Order	MM_TECHNICAL_GOODS_ISSUE	For more information, see: Inventory Clerk Persona Overview [page 93] Goods Issue [page 96]	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Pro): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES				Working with Goods Issues

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Vehicle Stock	MM_VEHI-CLE_STOCK	The Vehicle Stock component in SAP Service and Asset Manager offers inventory functionality to track stock items stored in vehicles, like work trucks or vans. Vehicle stock capabilities include: - Helping operators to manage stock items stored in vehicles for daily work. - Storage location assigned to the technician is displayed on the app. - Ability to transfer stock to and from the set storage location. - Look up stock for the set storage location. - Perform a physical inventory or cycle count for the set storage location. - Replenish stock through purchase requisitions. - Tracking tools and other items kept in the vehicles.	Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro) Field Service Technician (External)	Maintenance Technician (Pro): NO Field Service Technician (Standard): YES Field Service Technician (Pro): YES Field Service Technician (External): YES	2205		Vehicle Stock Look Up Configuration	Working with Stock Lookup Working with Stock Transfers and Transfer Posting Adding Vehicles

Note

From SAP Service and Asset Manager **2505 version**, the Vehicle Stock feature is supported by the Field Service Technician persona on the SAP S/4HANA back end system.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Equipment Assembly Information for Work Order	PM_ASSEMBLY	Plant Maintenance assemblies link spare parts to an equipment in a structured manner. These assemblies are not plant-specific and are not designed to be a complete material. Assemblies contain a bill of material (BOM).	Maintenance Technician (Pro)	Maintenance Technician (Pro): YES	2110	-	-	Work Order Detail Screen
Clock In / Clock Out	PM_CLOCK_IN_OUT	Clock In / Clock Out (CICO) capabilities enable multiple users to work on the same work order or operation. CICO also allows multiple work orders or operations that all belong to different users on a mobile device to exist in the Started state.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	1911	-	Clock In Clock Out Configuration	Working with Clock In Clock Out

						Mini- mum re- quired SAP		
Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Availa- ble from version	S/4HA NA back end	Link to Config- uration Guide	Link to User Guide
PM Confir- mat- ions for Time Record- ing	PM_CO NFIR- MAT- ION	PM confirmations on operations or work orders capture the time spent on the orders..	Mainte- nance Tech- nician (Pro) Field Serv- ice Techni- cian (Stand- ard) Field Serv- ice Techni- cian (Pro)	Mainte- nance Tech- nician (Pro): YES Field Serv- ice Techni- cian (Stand- ard): YES Field Serv- ice Techni- cian (Pro): YES	2.0		CATS and PM Confir- mation Time Entries Config- uration Config- uring Confir- mation Posting Dates - Over- view	Com- pleting a PM Confir- mation on a Maine- nance Order (Main- ten- ance Techni- cian user guide) Com- pleting a PM Confir- mation on a Maine- nance Order (Field Service Techni- cian user guide)

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Equipment Install and Dismantle	PM_INSTALL_DISMAN-TLE	You can install or dismantle equipment under existing equipment. You can also install or dismantle equipment under existing functional locations.	Maintenance Technician (Pro)	Maintenance Technician (Pro): YES	4.0		Enabling and Disabling Features Per User Through SAP Authorization	Equipment Overview Installing Equipment Dismantling Equipment

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Linear Asset Management	PM_LIN EAR_A SSET_ MAN- AG- MENT	Linear Asset Management (LAM) capabilities, enabling you to download the linear assets for your area of responsibility. Linear assets are technical systems with a linear infrastructure with conditions and properties that 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. LAM enables you to create linear assets as technical objects (such as functional locations and equipment) and store linear data. You can carry out maintenance tasks for these technical objects, which result in notifications, work orders, and measurement documents. These tasks allow you to: • Monitor the condition of your linear assets. • Identify where there is any damage or defect using the start point, end point, and offset. • Manage all types of maintenance tasks such as planned, unplanned, and preventative.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2005		Linear Asset Management Configuration	Linear Asset Management (LAM) Overview

					Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Feature name	Feature ID	Feature description	Personas supported	Enabled by default				
Measurement Readings	PM_MEASUREMENT	You can take measurement point readings at the work order header level across all operations for all equipment and functional locations.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Field Service Technician (Standard): NO Field Service Technician (Pro): YES	2005		Enabling and Disabling Features Per User Through SAP Authorization	Measuring Points and Readings Overview (Maintenance Technician user guide) Measuring Points and Readings Overview (Field Service Technician user guide - Customer Service back-end) Measuring Points and Readings Overview (Field

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
								Service Technician user guide - S/4 Field Service Management back-end)
PM Notifications	PM_NOTIFICATION	<i> ⓘ </i> Note For the Safety Technician persona, notifications are supported from version 2305.	Maintenance Technician (Standard) Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Safety Technician: YES	1.0	-		Notifications Overview (Maintenance Technician user guide) Adding Notifications to Objects (Safety Technician user guide)

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA back end	Link to Configuration Guide	Link to User Guide
Object Lists on Work Orders	PM_OBJECT_LIST	Object Lists support for work orders. A technical object serves a specific purpose or function, such as a piece of equipment. A technical object list is an object worklist that is configured to meet the specific requirements of the customer. An object worklist displays the most important pieces of information about the equipment and functional locations. An object worklist is associated with a work order.	Maintenance Technician (Pro)	Maintenance Technician (Pro): YES	2005	-	-	Using an Object List
Production, Resources and Tools	PM_PRT	Unlike fixed assets, production, resources, and tools (PRTs) are moveable (not stationary) operating resources that are required to perform an operation or suboperation. PRTs can be used repeatedly.	Maintenance Technician (Pro)	Maintenance Technician (Pro): YES	2.0	-	-	Managing PRTs

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Supervisor Mode	PM_SUPERVISOR_MODE	The supervisor role allows a team supervisor to: - Assign or reassign work orders using the mobile device. - Track the current work orders assigned to team members in order to monitor those work orders. - Use the back end to manage the members of the team. - Audit completed work orders to maintain a specific level of quality. - Approve workflows and reject work.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2105		Supervisor Mode Configuration	-
 Note In case of phase model is enabled, supervisor mode support is available from version 2305.								
PM Work Orders	PM_WORK_ORDERS	PM Work Orders	Maintenance Technician (Pro)	Maintenance Technician (Pro): YES	-			
Calibration Orders and Inspection Lots	QM_CALIBRATION	The Quality Management (QM) 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.	Maintenance Technician (Pro)	Maintenance Technician (Pro): NO	2010		Quality Management Configuration	Working with Quality Management

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Config-uration Guide	Link to User Guide
						S/4HA NA back end		
S/4 Service Orders	S4_SE RVICE_ INTE- GRA- TION	SAP S/4HANA Service integration for the Field Service Technician persona.	Field Service Technician (Standard)	Field Service Technician (Standard): NO	2305		Field Service Technician Configuration on an SAP S/4HANA Back End	Service Order Detail Screen
General configuration of safety-related features	WCM_ COM- MON	For the Safety Technician persona in general as well as for a number of safety-related features to work, you must enable the WCM_COMMON feature.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		General Feature Configuration - Safety Technician Persona	Safety Technician User Guide [page 99] Working with Safety Technician Objects (Maintenance Technician User Guide)

Note

For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Isolation Certificate	WCM_SAFETY_CERTIFICATE	Isolation Certificates (also referred to as Safety Certificates) are used to describe lockout and tagout procedures when controlling the physical blocking and tagging of affected technical objects. It contains the technical asset objects that are to be switched or controlled in the application and provides a detailed description of how the system is to be isolated.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Isolation Certificate Configuration	Isolation Certificate Detail Screen

Note

- For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version.
- The [configuration of Assignment Management](#) affects the configurations of **WCM Work Order**, **Isolation Certificate** and **Work Permit**.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Other Certificate	WCM_SAFETY_CERTIFICATE	Other Certificate is used to describe lockout and tagout procedures when controlling the physical blocking and tagging of affected technical objects. Compared to Isolation Certificates, however, there is no action that can be done with Other Certificates, they are only displayed to check the status of the technical asset objects, and they can be attached to the work permits.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Isolation Certificate Configuration	Certificate Detail Screen

 Note

- The configuration process for Other Certificates is the same as for [Isolation Certificates](#).
- For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version.

					Mini- mum re- quired SAP			
Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Availa- ble from version	S/4HA NA back end	Link to Config- uration Guide	Link to User Guide
Assign- ment Man- age- ment of Safety- Related Fea- tures	-	Safety Technicians can see a filtered list of items on their mobile devices that are assigned to them. This applies to the following list screens: Operational Items Isolation Certificates Other Cerificates Work Permits Work Orders (linked to the as- signed objects) Work Approvals (linked to the assigned objects)	Mainte- nance Tech- nician (Pro) Safety Tech- nician	Mainte- nance Tech- nician (Pro): NO Safety Tech- nician: YES	2310		Assign- ment Man- age- ment of Safety- Related Fea- tures	Assign- ment Man- age- ment - Filter- ing Your As- signed Objects
 Note For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version.								

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Tagging and Un-tagging	-	For the Safety Technician persona, a key task is to orderly tag and subsequently untag technical objects, so that work and tests on Technical Objects can be performed safely by preventing accidental or unauthorized access to dangerous energy sources. Using SAP Service and Asset Manager, you can provide digital control of all the tagging and untagging procedures.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Operational Item Configuration	Tagging and Un-tagging

📌 Note

- As of 2505 release, limited support is available for the temporary untagging phase. For more information, see [Supported Usage Types - Safety Technician Persona](#).
- For more information about tagging and untagging, refer to [Lockout/Tagout](#) in *Work Clearance Management (PM-WCM)* documentation.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Operational Item	-	To ensure that safety measures for work are performed at the operation level, Safety Technicians must perform isolation procedures for an Operational Item. The Operational Item is used to describe the operational processing of lockout and tagout procedures. This process consists of orderly tagging and subsequent untagging of technical objects, so that work and tests on technical objects can be performed safely.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Operational Item Configuration	Operational Item Detail Screen Add New Operational Item on the Go to Isolation Certificate
 Note - For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version. - For more information about recording lockout and tagout activity, refer to Lockout/Tagout section in <i>SAP ERP - Work Clearance Management (PM-WCM)</i> documentation.								
WCM Work Order	WCM_ORDER	Work Clearance order	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Work Order as a Dependency - Safety Technician Persona	Work Order Detail Screen
 Note The configuration of Assignment Management affects the configurations of WCM Work Order, Isolation Certificate and Work Permit.								

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Work Permit	WCM_WORK_PERMIT	A (Work Clearance) Work Permit is approved by one or more Supervisors and is visible for the Safety Technician persona. After the Safety Technician persona has done his safety work by implementing and maintaining lockout and tagout procedures for energy source isolation, the Work Permit can be released, and the Maintenance Technician persona can do the work assigned to him. A (Work Clearance) Work Permit is approved by one or more Supervisors and is visible for the Safety Technician persona. After the Safety Technician persona has done his safety work by implementing and maintaining lockout and tagout procedures for energy source isolation, the Work Permit can be released, and the Maintenance Technician persona can do the work assigned to him.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: YES	2305		Work Permit Configuration	Work Permit Detail Screen

Note

The [configuration of Assignment Management](#) affects the configurations of **WCM Work Order**, **Safety Certificate** and **Work Permit**.

Note

- For the Maintenance Technician (Pro) persona, this feature is only available from 2410 version.

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
		The configuration of Assignment Management affects the configurations of WCM Work Order, Isolation Certificate and Work Permit.						
Work Permit Approval	-	Safety Technicians can issue approvals on the details screen of a selected Work Permit.	Maintenance Technician (Pro) Safety Technician	Maintenance Technician (Pro): NO Safety Technician: NO	2310		Work Permit Approvals Configuration	Issuing Work Permit Approvals
Low Code No Code	-	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.			2310			-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-required SAP S/4HA back end	Link to Configuration Guide	Link to User Guide
Delta Sync Optimization - Downloading Only Modified Entities	-	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.	Maintenance Technician (Standard) Maintenance Technician (Pro) Maintenance Technician (External) Field Service Technician (Standard) Field Service Technician (Pro) Inventory Clerk Safety Technician Extended Warehouse Clerk Field Logistics	Maintenance Technician (Standard): YES Maintenance Technician (Pro): YES Maintenance Technician (External): YES Field Service Technician (Standard): YES Field Service Technician (Pro): YES Inventory Clerk: YES Safety Technician: YES Extended Warehouse Clerk: YES	2310		Downloading Only Modified Entities	Syncing to the SAP Back End

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP	Link to Configuration Guide	Link to User Guide
						S/4HA NA back end		
Delta Sync Optimization - Lead Entity Based Flow	-	Lead entity based flow is a feature available for oMDOs and is enabled with exchange. Lead entity based flow performs an optimized delta key calculation, which reduces the delta sync duration.	Maintenance Technician (Standard) Maintenance Technician (Pro) Maintenance Technician (External) Field Service Technician (Standard) Field Service Technician (Pro) Field Service Technician (External) Inventory Clerk Safety Technician Extended Warehouse Clerk Field Logistics	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Maintenance Technician (External): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO Field Service Technician (External): NO Inventory Clerk (External): NO Inventory Clerk: NO Safety Technician: NO Extended Warehouse Clerk: NO Field Logistics Clerk: NO Field Logistics: NO	2505		Lead Entity Based Flow Overview	Syncing to the SAP Back End

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
Shadow Table	-	Any custom configuration changes are stored in separate sets of tables, unlike standard configuration tables that use the MAIF framework. A custom application created using the configuration panel is marked as supporting shadow tables. Note This feature is part of the MAIF documentation. For more information about general MAIF configuration procedures, refer to the <i>MAIF Configuration Guide</i>.			2305		Shadow Table	-
Removal of Dependent Objects Based on Lead Objects	-	SAP Service and Asset Manager downloads data to mobile by using distribution mode. One of the supported distribution 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.			2310		Removal of Dependent Objects Based on Lead Objects	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Minimum required SAP			
					Available from version	S/4HA NA back end	Link to Configuration Guide	Link to User Guide
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.			2310		Support for LITE Version of Technical Objects	-
Namespace Check	-	SAP provides namespace check for a number of configuration areas. With SAP Service and Asset Manager 2210 or earlier versions, you can bypass namespace checks. 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.					Namespace Check Configuration	-
 Note As of SAP Service and Asset Manager 2305, this feature is no longer supported.								

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum required SAP S/4HANA back end	Link to Configuration Guide	Link to User Guide
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.			2310		Auto-Resize Images with a Configured Maximum Size	-
Mobile Transaction History	-	With this feature, SAP introduces the possibility for users to record all successful <i>CREATE</i> and <i>UPDATE</i> transactions from the mobile device in to the <i>/SYCLO/MBLO2</i> table. This provides insight into which objects are either created or changed via the mobile application, by whom, and when the changes are made.			2310		Mobile Transaction History	-
 Note This feature is part of the MAIF documentation. For more information about general MAIF configuration procedures, refer to the <i>MAIF Configuration Guide</i>.								
Local Object Mobile Status	-	With this feature you can enable or disable the mobile client user to take a local object through its entire life-cycle even if the client is offline.			1911		Local Object Mobile Status Configuration	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	S/4HA NA back end	Mini-mum re-quired SAP	Link to Configuration Guide	Link to User Guide
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.			2110			Enabling Multi-User Support	Multi-User Overview (Maintenance Technician User Guide) Multi-User Overview (Field Service Technician User Guide)
Deep Link Support	-	Support of standard deep link URLs in SAP Service and Asset Manager to perform create, update, view operations.			2305			Customizing Deep Linking	-

Feature name	Feature ID	Feature description	Personas supported	Enabled by default	Available from version	Minimum re-quired SAP S/4HA NA back end	Link to Configuration Guide	Link to User Guide
Zebra Scanner Integration	-	On Zebra devices, users can scan barcodes by using the Zebra Scanner integration, which will allow them to: - Scan a single barcode to navigate directly to an object's detail page. - Trigger the scanning function directly on Overview or List pages, by pressing the barcode scanner button on the device.	Maintenance Technician (Standard) Maintenance Technician (Pro) Field Service Technician (Standard) Field Service Technician (Pro)	Maintenance Technician (Standard): NO Maintenance Technician (Pro): NO Field Service Technician (Standard): NO Field Service Technician (Pro): NO	2410		Zebra Scanner Configuration	Using Zebra Scanner

Note

This feature is a third-party integration by Zebra. For more information and the list of supported devices, refer to the official [Zebra documentation](#) and [Zebra Products and Software Support](#).

3 Product Licensing Overview

Software Components

- **SAP Mobile Execution and Dynamic Forms** is a bundle offering, giving access to the following mobile applications, as well as to [a fixed entitlement of SAP Dynamic Forms \[page 71\]](#):
 - **SAP Service and Asset Manager**: A mobile asset management application that supports Maintenance, Service and Safety Technicians, as well as Inventory, Warehouse Management and Logistics features.
 - **SAP Dynamic Forms**: With this application you can design, deploy and use custom forms and extensions, from basic to complex ones. These forms can be integrated in an offline-mobile solution such as SAP Service and Asset Manager and also can be used in an online SAP Fiori web-based application on the SAP BTP.
 - The **SAP Mobile Execution and Dynamic Forms** bundle offering includes a fixed entitlement of **1200 documents per Full Use Equivalent (FUE)**.
 - Although there is no size limit for uploading image or video attachments, submitted forms are counted as documents. Document consumption is based on the total size of each submitted Form Instance, namely, **one document is consumed for every 3 MB** of Form Instance data. For example:
 - A Form Instance of 3 MB or less counts as 1 document.
 - A Form Instance larger than 3 MB but smaller than 6 MB counts as 2 documents.
 - If a Form Instance exceeds 3 MB, the number of documents consumed is calculated by dividing the total size (in MB) by 3. Any remainder is counted as an additional document.
 - **SAP Field Service Management Mobile**: The [SAP Field Service Management platform](#) includes an offline-first SaaS-based mobile application for handling service calls. This application is considered as **Standard Use**.
 - **SAP Maintenance Assistant**: The mobile companion for Maintenance Technicians using the [SAP S/4HANA Cloud Public Edition](#). This application is considered as **Standard Use**.
- **SAP Dynamic Forms Add-on** gives you access to a tiered volume of form instances in addition to the fixed entitlement above.

ⓘ Note

[SAP Mobile Execution and Dynamic Forms \[page 71\]](#) is a prerequisite for this component.

Usage Types Comparison

The following table compares the licensing options you can use as part of **SAP Mobile Execution and SAP Dynamic Forms**.

Note

To get a better understanding of the license entitlements, please make sure to select the **INCLUDED** filter for all usage types (**Basic**, **Standard** and **Professional**).

Application	Details	Basic Use	Standard Use	Professional Use
SAP Dynamic Forms	• Build forms from an online form designer and assign them to their respective SAP objects. • Manage forms lifecycle (monitor version controls, utilization of data and use import export capabilities) • Access administration panel and backend integration tools • Complete forms from an online Forms Explorer	INCLUDED	INCLUDED	INCLUDED
SAP Dynamic Forms	Fixed entitlement of 1200 documents FUE/contract year	INCLUDED	INCLUDED	INCLUDED

Application	Details	Basic Use	Standard Use	Professional Use
SAP Service and Asset Manager Basic Personas	• Maintenance Technician External (compared to Maintenance Technician Standard and Professional, it is a separate persona with limited functionality, created specifically for external workers within your organization) • Field Service Technician External (compared to Field Service Technician Standard and Professional, it is a separate persona with limited functionality, created specifically for external workers within your organization)	INCLUDED	NOT INCLUDED	NOT INCLUDED

Application	Details	Basic Use	Standard Use	Professional Use
SAP Service and Asset Manager Standard Personas	- You can complete forms from SAP Service and Asset Manager (offline use case). - You can choose either of the following personas: Maintenance Technician Standard (manage maintenance notifications and complex asset information) Field Service Technician Standard (perform customer service operations) Inventory Clerk (manage inventory, goods movements and material documents) Warehouse Clerk (optimize the use of various storage bins and stock movements, store stocks from several plants together in a randomly-managed warehouse)	NOT INCLUDED	INCLUDED	INCLUDED

Application	Details	Basic Use	Standard Use	Professional Use
	• Field Logistics Operator (manage the movement of goods in forwarding and returning scenarios)			
SAP Service and Asset Manager Professional Personas	• You can choose multiple personas, as well as standard and custom personas: • Field Service Technician Professional (perform customer service operations including meter management processes) • Maintenance Technician Professional (maintain enterprise assets and perform the job with complex asset information) • Safety Technician (perform clearance activities, isolation of equipment and manage permits) • You can complete forms from SAP Service and Asset Manager (offline use case).	NOT INCLUDED	NOT INCLUDED	INCLUDED

Application	Details	Basic Use	Standard Use	Professional Use
SAP Field Service Management Mobile	See SAP Field Service Management Mobile .	NOT INCLUDED	INCLUDED	INCLUDED
SAP Maintenance Assistant	See SAP Maintenance Assistant .	NOT INCLUDED	INCLUDED	INCLUDED

⚠ Caution

Please note that the SAP Service and Asset Manager license provisions users with access to the SAP S/4HANA back end system with similar functionality; however, it does not include full transaction access. This could lead to overuse of Full Usage Equivalents (FUEs). To resolve this issue, you need to set up a special user type (see [Licensing - Important notes \[page 76\]](#)).

3.1 Licensing - Important Notes

Please note the following regarding licensing and typical use cases:

- The SAP Service and Asset Manager mobile application Full User Equivalent (FUE) licenses **do not provide** any entitlement for custom app development or usage, even if it is by the same user. This is governed by the Mobile Service Plans. The SAP Service and Asset Manager application includes entitlements to the [basic-plus-app mobile services plan](#). Custom development is not permitted; however, [in-app extensibility options are available for SAP Service and Asset Manager](#).
- If you would like to develop and deploy mobile apps on the same platform, you can license the appropriate service plan that meets your needs. For more information about the available service plans, refer to [Active Service Plans for mobile services](#) in *SAP Mobile Services documentation*.
- SAP Service and Asset Manager-named user provisioning from a SAP Service and Asset Manager license will provision users to perform similar transactions from SAP S/4HANA or SAP ERP back end, but **will not provision** the complete SAP S/4HANA transaction access. This could lead to overuse of Full Usage Equivalents (FUEs). To resolve this issue, you need to set up a **special user type**:
 - To measure users in your SAP installation clearly and precisely, your users must be classified according to their current use and the price list they are based on prior to each system measurement.
 - If a user requires back end on-premise or private cloud access for their cloud service (such as SAP Service and Asset Manager mobile solution):
 - In *SAP GUI*, use the [transaction code](#) USMM.
 - Classify the user with a **special module user type** for identification.

SAP System Measurement Settings

System Measurement
Information

System Measurement Settings

- System Measurement Settings
 - Clients
 - Price Lists
 - User Types**
 - Define Email Address
 - Define RFC Destination for LAW Cent
 - Define Parameters for History Admin
 - Role-Based Classification
- Rule-Based Classification

User Type Maintenance

ID	Contractual User Type	Active
07		☒
68		☒
69	PA	☒
71	SAP Service and Asset Manager	☒
72	SPECIAL MODULE TYPE 2	☐
73	SPECIAL MODULE TYPE 3	☐
74	SPECIAL MODULE TYPE 4	☐
75	SPECIAL MODULE TYPE 5	☐
76	Special Module Type 6	☐
77	Special Module Type 7	☐
78	Special Module Type 8	☐
79	Special Module Type 9	☐
80	Special Module Type 10	☐
81	Special Module Type 11	☐
82	Special Module Type 12	☐
83	Special Module Type 13	☐
84	Special Module Type 14	☐
85	Special Module Type 15	☐
86	Special Module Type 16	☐
87	Special Module Type 17	☐
88	Special Module Type 18	☐
89	Special Module Type 19	☐
93		☒
94		☒
95		☒

3. The user will not consume a named user license from SAP S/4HANA during the consolidation, or will be excluded from the regular user count as part of the audit.
3. If the same user requires access to another SAP software that is not part of the cloud service scope on this Prod system (with a named user requirement):
 1. Classify the user with the appropriate **contractual definition**.
 2. During consolidation or deduplication, the user will be counted only at their highest user type — or not counted at all, if they are unique to the special module user type.
4. In **SAP GUI** **SU01**, set up the [special module user type \[page 76\]](#) for all **SAP Mobile Execution and Dynamic Forms (MEDF)** users, along with the required authorization roles to run the application.

SAP Display Users

User: User with Classic Address

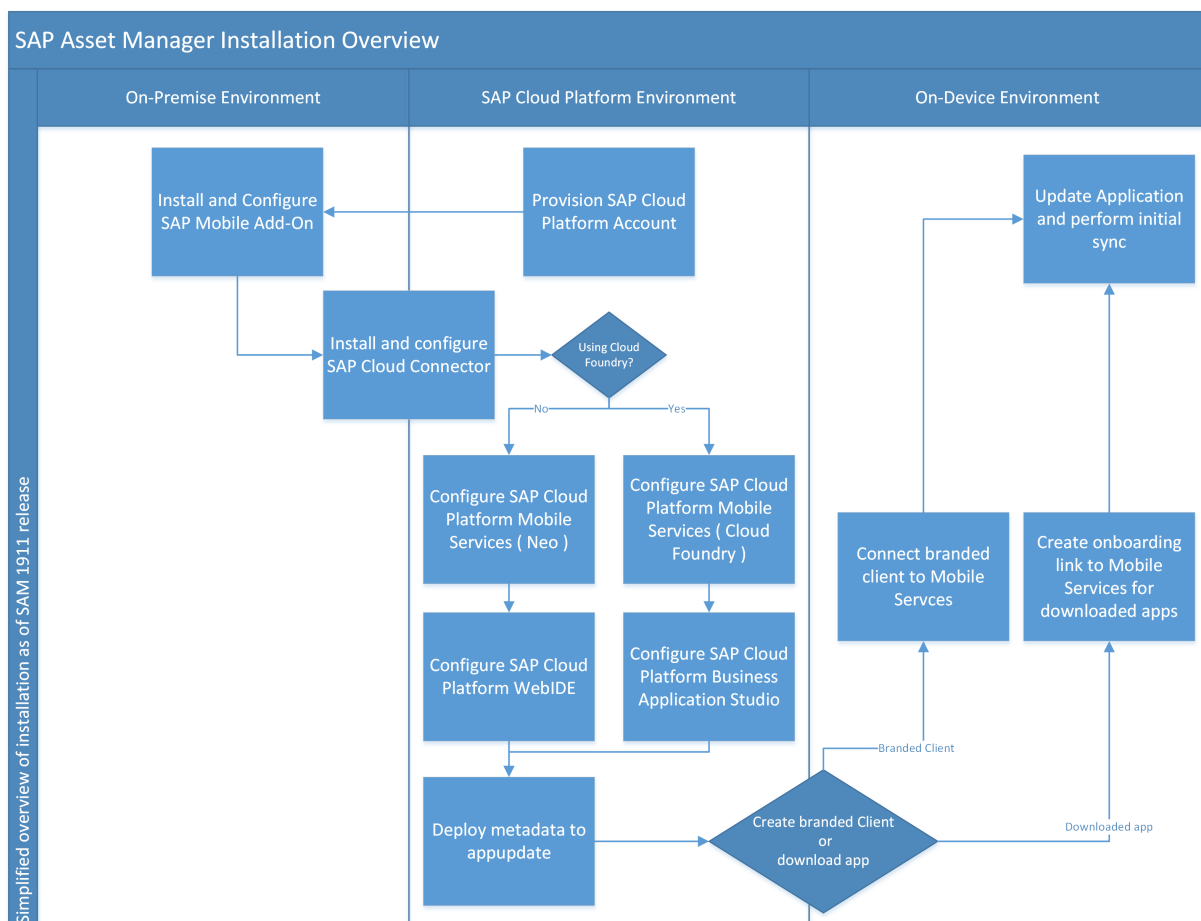
Changed By: Status:

Documentation
Address
Logon Data
SNC
Defaults
Parameters
Roles
Profiles
Groups
Personalization
Lic. Data
User Attributes

Contractual User Type ID

4 Getting Started with SAP Service and Asset Manager - Overview

You can find a complete [high-level installation process overview](#) in the *SAP Service and Asset Manager Installation Guide*.



- <https://help.sap.com/viewer/20f0559b29974bc9b7b069b41176ca17/latest/en-US/acd3742938b74528aa1b3d8a35c1a3dc.html> [https://help.sap.com/viewer/20f0559b29974bc9b7b069b41176ca17/latest/en-US/acd3742938b74528aa1b3d8a35c1a3dc.html]
- https://help.sap.com/viewer/product/IDENTITY_PROVISIONING/Cloud/en-US [https://help.sap.com/viewer/product/IDENTITY_PROVISIONING/Cloud/en-US]
- <https://help.sap.com/viewer/38dbd9fbb49240f3b4d954e92335e670/Cloud/en-US/d2a9afc1681c4e57a4a0f2039274d250.html> [https://help.sap.com/viewer/38dbd9fbb49240f3b4d954e92335e670/Cloud/en-US/d2a9afc1681c4e57a4a0f2039274d250.html]

- <https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/858f2776bd6d459692a49be9f1cb3499.html> [https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/858f2776bd6d459692a49be9f1cb3499.html]
- <https://help.sap.com/viewer/977416d43cd74bdc958289038749100e/Latest/en-US/97e2eca121054d96bae677e1eadbb688.html> [https://help.sap.com/viewer/977416d43cd74bdc958289038749100e/Latest/en-US/97e2eca121054d96bae677e1eadbb688.html]
- <https://help.sap.com/viewer/977416d43cd74bdc958289038749100e/Latest/en-US/4b6dd4a0d07d4ed2ad04e6cfae25d17.html> [https://help.sap.com/viewer/977416d43cd74bdc958289038749100e/Latest/en-US/4b6dd4a0d07d4ed2ad04e6cfae25d17.html]
- <https://help.sap.com/viewer/DRAFT/fb9ae24b2b77468ba00e10df21c5cf24/latest/en-US/62a78f4ee72a4b0c80101be9ca6e400a.html> [https://help.sap.com/viewer/DRAFT/fb9ae24b2b77468ba00e10df21c5cf24/latest/en-US/62a78f4ee72a4b0c80101be9ca6e400a.html]
- <https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/57ae3d62f63440f7952e57bfcef948d3.html> [https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/57ae3d62f63440f7952e57bfcef948d3.html]
- <https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/50d2c45ad08b4231b1c3fcc0c096f95f.html> [https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/50d2c45ad08b4231b1c3fcc0c096f95f.html]
- <https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/50d2c45ad08b4231b1c3fcc0c096f95f.html> [https://help.sap.com/viewer/DRAFT/d2e76ee96b6141c9bfc3afae96b7aa71/latest/en-US/50d2c45ad08b4231b1c3fcc0c096f95f.html]
- <https://help.sap.com/viewer/468990a67780424a9e66eb096d4345bb/Cloud/en-US/d2a9afc1681c4e57a4a0f2039274d250.html> [https://help.sap.com/viewer/468990a67780424a9e66eb096d4345bb/Cloud/en-US/d2a9afc1681c4e57a4a0f2039274d250.html]

The SAP Service and Asset Manager requires a compatible environment to operate in. Requisite components include:

- From the SAP Business Technology Platform:
 - An SAP Business Technology Platform account provisioned with the following services:
 - SAP BTP services for development and operations
 - SAP Web IDE full stack
- From the on-premise environment:
 - An SAP on-premise back-end system compatible with your SAP S/4HANA or SAP ERP mobile add-on. For more information, see the [SAP On-Premise Environment \[page 102\]](#) topic.
 - A Cloud Connector to connect your SAP on-premise back-end system to the SAP Business Technology Platform
- A mobile device capable of running a version of the Mobile Development Kit compatible with the SAP Service and Asset Manager application.
 - All requisite components for the SAP Service and Asset Manager are installed upon completion of the [SAP Service and Asset Manager installation process](#).

4.1 SAP Service and Asset Manager Application

SAP Service and Asset Manager leverages the digital core with SAP S/4HANA as well as the SAP Business Technology Platform as an IoT platform.

SAP Service and Asset Manager manages work orders, notifications, condition monitoring, material consumption, time management, and failure analysis.

The Mobile Development Kit provides a runtime and full customization framework for SAP Service and Asset Manager. Users can easily customize SAP Service and Asset Manager by adding and editing actions, business logic, screens, and styling.

4.1.1 Supported Languages

The SAP Service and Asset Manager application supports the following (32) languages:

- ar001 - Arabic
- bg_BG - Bulgarian
- zh_hans - Simplified Chinese
- zh_hant - Traditional Chinese
- csCZ - Czech Republic
- daDK - Danish
- nlBE - Dutch
- elGR - Greek
- enUS - English
- fiFI - Finnish
- frFR - French
- deDE - German
- heIL - Hebrew
- hrHR - Croatian
- huHU - Hungarian
- inID - Indonesian
- itIT - Italian
- jaJP - Japanese
- koKR - Korean
- nbNO - Norwegian
- plPL - Polish
- ptBR - Portuguese
- roRO - Romanian
- RuRU - Russian
- srSP - Serbian
- skSK - Slovak

- sISL - Slovenian
- esES - Spanish
- svSE - Swedish
- thTH - Thai
- trTR - Turkish
- viVN - Vietnamese

4.2 Mobile Development Kit

The Mobile Development Kit is a metadata based application development platform.

📘 Note

See the following topics and guides for detailed information on the Mobile Development Kit and the SAP Business Application Studio:

- SAP Business Application Studio: See the [Full-Stack Application Using Productivity Tools](#) guide on the SAP Business Application Studio help portal.
- Mobile Development Kit: See the [Using SAP Business Technology Platform Mobile Services, mobile development kit](#) guide.
- If a custom SAP Service and Asset Manager build is needed for Cloud Foundry, see the [Creating a Build Job for Customized MDK Clients](#) procedure.

The Mobile Development Kit lets you customize, deploy, and manage SAP Service and Asset Manager in the cloud. The Mobile Development Kit editor lets you edit your 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 using the Mobile Development Kit client.

The Mobile Development Kit allows business process experts to customize SAP Service and Asset Manager in a cloud-based editor using SAP Business Application Studio, and developers to code directly in the metadata files.

4.3 SAP Business Technology Platform Overview

SAP Business Technology Platform enables customers and partners to rapidly build, deploy, and manage cloud-based enterprise applications that complement and extend your SAP or non-SAP solutions, either on-premise or on-demand.

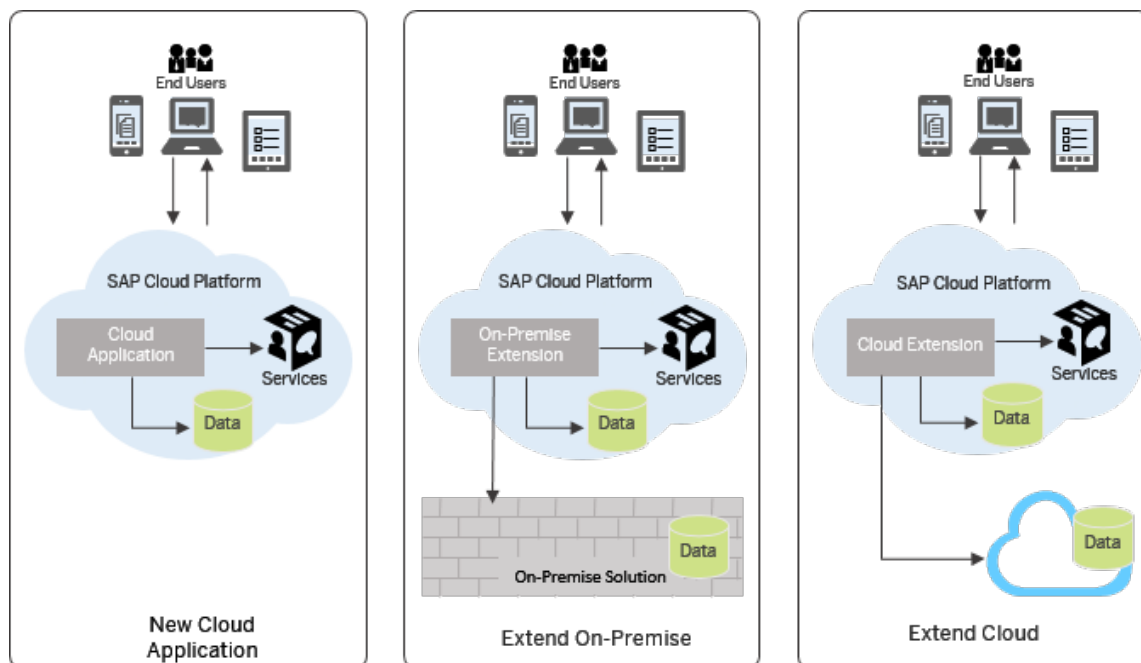
📘 Note

For more information on prerequisites and procedures for setting up customer accounts on SAP Business Technology Platform, see the topic [Getting Started with a Customer Account: Workflow in the Neo and Cloud Foundry environment](#).

SAP Business Technology Platform is an in-memory cloud platform based on open standards. It provides access to a feature-rich, easy-to-use development environment in the cloud. The platform includes a comprehensive set of services for integration, enterprise mobility, collaboration, and analytics.

As a Platform-as-a-Service operated by SAP, our product frees your administrators from any infrastructure and IT costs and offers state-of-the-art quality of service.

Scenarios



- **Develop new cloud applications**
This scenario is suitable for companies that need to start developing new applications from scratch. You can create brand new cloud applications and reach your end customers easily, with a low learning curve and small capital investment in software and hardware.
- **Develop on-premise extensions**
This scenario is suitable for companies that have already invested a lot in on-premise IT infrastructure. You can create the new extensions to the system on the cloud, and integrate seamlessly with the on-premise components using Connectivity Service and Cloud Connector.
- **Develop cloud extensions**
At SAP Business Technology Platform, you can also develop extensions to other cloud products, such as SuccessFactors.

Application development

You can use the following programming models to build highly scalable applications:

- Java - SAP Business Technology Platform is Java EE 6 Web Profile certified. You can develop Java applications just like for any application server. You can also easily run your existing Java applications on the platform.
- SAP HANA - you can use the SAP HANA development tools to create comprehensive analytical models and build applications with SAP HANA programmatic interfaces and integrated development environment.
- HTML5 - you can easily develop and run lightweight HTML5 applications in a cloud environment.
- SAPUI5 - use the UI Development Toolkit for HTML5 (SAPUI5) for developing rich user interfaces for modern Web business applications.

Solutions

In the context of SAP Business Technology Platform, a solution is comprised of various application types and configurations created with different technologies, and is designed to implement a certain scenario or task flow. You can deploy solutions by using the Change and Transport System (CTS+) tool, the console client, or by using the cockpit, where you can also monitor your solutions. To describe and technically realize the solutions, SAP introduces the multi-target application (MTA) model. It encompasses and describes application modules, dependencies, and interfaces in an approach that facilitates validation, orchestration, maintenance, and automation of the application throughout its lifecycle.

Runtime container for applications

Applications developed on SAP Business Technology Platform run in a modular and lightweight runtime container. The platform provides a secure, scalable runtime environment with reusable platform services.

Virtual Machines

Virtual machines allow you to install and maintain your own applications in scenarios not covered by the platform. A virtual machine is the virtualized hardware resource (CPU, RAM, disk space, installed OS) that blends the line between Platform-as-a-Service and Infrastructure-as-a-Service.

Services

You can consume a set of services provided by SAP Business Technology Platform according to the technology you prefer and the use cases of your scenarios.

Integration with SAP and non-SAP software

SAP Business Technology Platform facilitates secure integration with on-premise systems running software from SAP and other vendors. Using the platform services, such as the connectivity service, applications can establish secure connections to on-premise solutions, enabling integration scenarios with your cloud based applications.

In-memory persistence

SAP Business Technology Platform includes persistence powered by SAP HANA, taking full advantage of its real-time, in-memory computing technology and built-in analytics.

Secure data

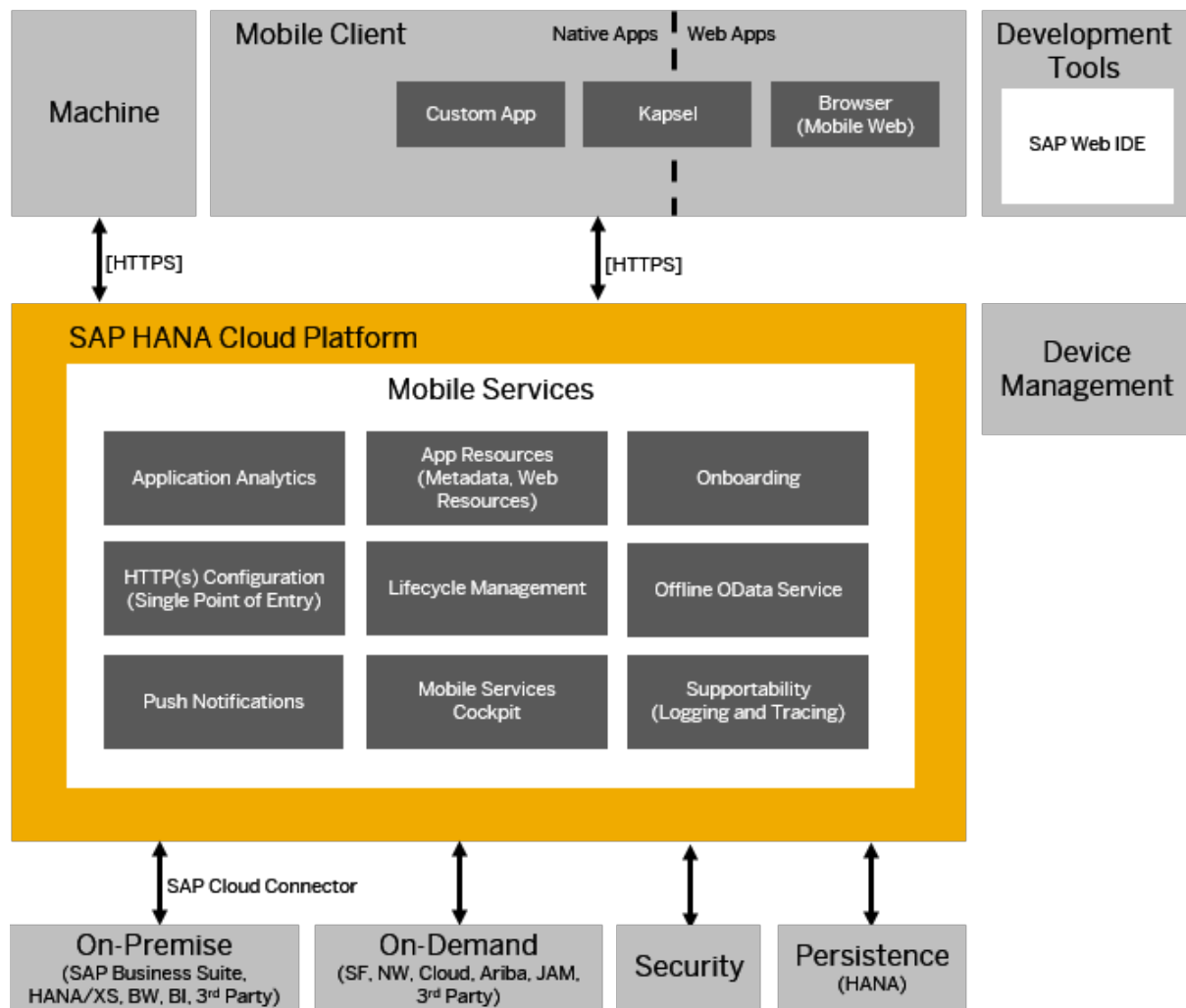
Comprehensive, multilevel security measures have been built into SAP Business Technology Platform. This security is engineered to protect your mission critical business data and assets and to provide the necessary industry standard compliance certifications.

Free trial

You can start by getting a free SAP Business Technology Platform developer license on SAP Business Technology Platform Developer Center that also gives you access to our community and all the free technical resources, tutorials, blogs, support you need.

4.3.1 SAP Business Technology Platform Mobile Services Overview

SAP Business Technology Platform Mobile Services, or SAP BTP services, provides services to mobile applications, such as application analytics, app resources, onboarding, and HTTP/HTTPS configuration.



Mobile application services consist of the following:

- **Application analytics:** Usage statistics that are displayed graphically in the SAP BTP cockpit
- **App resources:** Containers of dynamic configurations, styles, or content that are downloaded by native applications
- **Onboarding:** Authentication of users who are registering through SAP Mobile Place
- **HTTP/HTTPS configuration:** Open standards for client communications
- **Life cycle management:** Managing and deploying multiple versions of an application
- **Offline oData service:** Optimizes data transport between the back end and the client offline store
- **Push notifications:** Native notifications sent from back-end systems to the server, which forwards them on to the clients
- **SAP BTP cockpit:** Deploys, manages, and monitors applications

- **Supportability:** Logs for monitoring system health and troubleshooting

SAP BTP services can expose on-premise back end services through Cloud Connector, and on-demand back end services directly.

SAP BTP services security enables you to use an on-premise identity management system for on-demand applications. You can use basic authentication using LDAP, or form-based application authentication using SAML.

All configuration and runtime data is persisted in an SAP S/4HANA database.

4.3.2 SAP Business Technology Platform SDK Overview

The SAP Business Technology Platform SDK includes well defined layers (SDK frameworks, components, and platform services) that simplify development of enterprise-ready mobile native apps that take full advantage of the mobile platform features.

The SAP Business Technology Platform SDK is tightly integrated with the SAP Business Technology Platform Mobile Services Cockpit to provide the following:

- End-to-end integrated security
- Support for offline applications
- Enterprise grade logging and monitoring support
- Access to core SAP ERP or SAP S/4HANA data and business processes, as well as access to third-party data sources
- Access to SAP Business Technology Platform capabilities and services

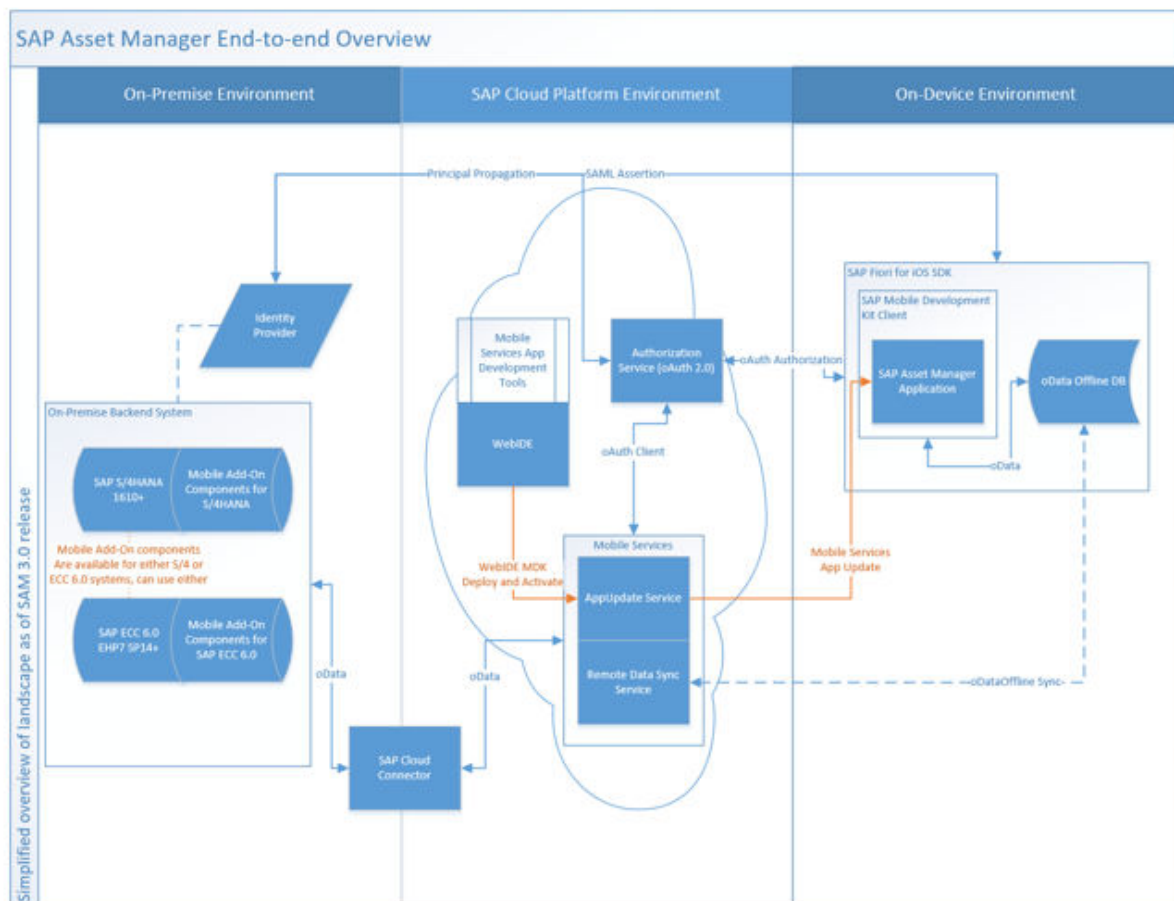
Note

For more information about the SAP Business Technology Platform SDK, see [SAP Business Technology Platform documentation](#).

5 How SAP Service and Asset Manager Works in a Neo Environment

→ Remember

- The following information details setting up subaccounts on Neo environments for use with SAP Service and Asset Manager. For information on how to set up Cloud Foundry subaccounts with SAP Service and Asset Manager, see the topic [How SAP Service and Asset Manager Works in a Cloud Foundry Environment \[page 89\]](#).
- SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).



These components work in concert to continuously synchronize data from the back end SAP on-premise database onto the SAP Service and Asset Manager application on mobile devices through the following flow:

1. The SAP Service and Asset Manager application requests authorization from the SAP Business Technology Platform to authenticate against an identity provider defined by the SAP Business Technology Platform using an OAuth2.0 Service.
2. SAP Service and Asset Manager uses the authorization grant from the OAuth 2.0 service to access the remote data sync feature on the mobile service of the SAP Business Technology Platform using the retrieved authentication.
3. The remote data sync feature forwards data synchronization requests from the SAP Service and Asset Manager application to the Cloud Connector as OData requests, along with the requisite authentication via principal propagation.
4. The Cloud Connector brings the OData requests into the secured on-premise environment, and forwards it to the SAP Mobile Add-On installed on the on-premise NetWeaver Gateway of the SAP system.
5. The SAP Mobile Add-On then generates the requisite responses and sends the OData response to the Cloud Connector to be returned to the remote data sync feature on mobile services.
6. The remote data sync feature synchronizes the offline data store on the device with the OData response returned from the SAP Mobile Add-On.

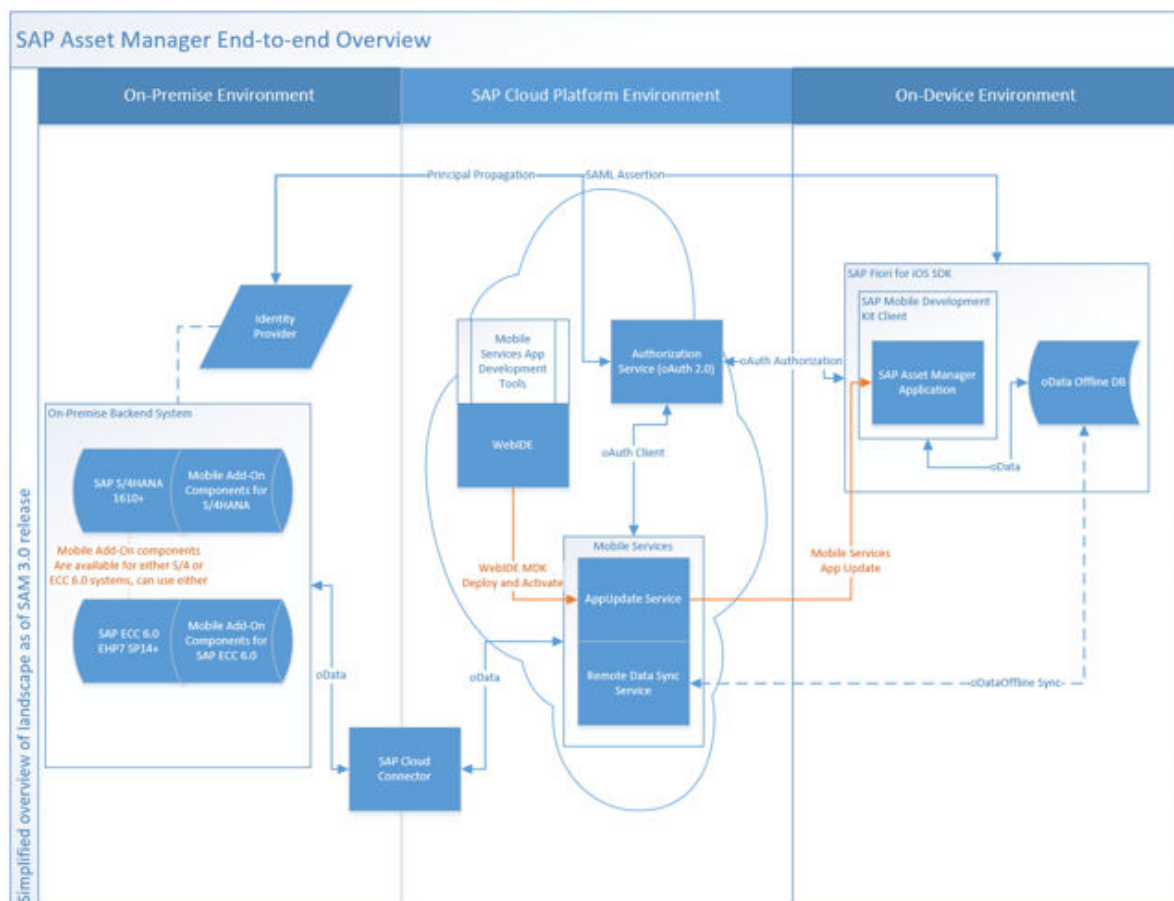
Additionally, another set of components work in concert to ensure that the SAP Service and Asset Manager application itself is up-to-date and behaves as intended through the following flow:

1. Users can use the SAP Web IDE on the SAP Business Technology Platform uses the SAP Business Technology Platform Mobile Services development tools plug-in to update the SAP Service and Asset Manager application or install additional components onto the application.
2. The SAP Web IDE can perform an [MDK Deploy and Activate](#) of the updated application definitions for SAP Service and Asset Manager to the AppUpdate feature from SAP Business Technology Platform Mobile Services.
3. SAP Service and Asset Manager periodically checks the AppUpdate feature for new definitions of SAP Service and Asset Manager, and retrieves the updates on demand.

6 How SAP Service and Asset Manager Works in a Cloud Foundry Environment

Note

- The following information details setting up subaccounts on Cloud Foundry environments for use with SAP Service and Asset Manager. For information on how to set up Neo subaccounts with SAP Service and Asset Manager, see the topic [How SAP Service and Asset Manager Works in a Neo Environment](#) [page 87].
- SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).



These components work in concert to continuously synchronize data from the back end SAP on-premise database onto the SAP Service and Asset Manager application on mobile devices through the following flow:

1. The SAP Service and Asset Manager application requests authorization from the SAP Business Technology Platform to authenticate against an identity provider defined by the SAP Business Technology Platform using an OAuth2.0 Service.
2. SAP Service and Asset Manager uses the authorization grant from the OAuth 2.0 service to access the remote data sync feature on the mobile service of the SAP Business Technology Platform using the retrieved authentication.
3. The remote data sync feature forwards data synchronization requests from the SAP Service and Asset Manager application to the Cloud Connector as OData requests, along with the requisite authentication via principal propagation.
4. The Cloud Connector brings the OData requests into the secured on-premise environment, and forwards it to the SAP Mobile Add-On installed on the on-premise NetWeaver Gateway of the SAP system.
5. The SAP Mobile Add-On then generates the requisite responses and sends the OData response to the Cloud Connector to be returned to the remote data sync feature on mobile services.
6. The remote data sync feature synchronizes the offline data store on the device with the OData response returned from the SAP Mobile Add-On.

Additionally, another set of components work in concert to ensure that the SAP Service and Asset Manager application itself is up-to-date and behaves as intended through the following flow:

1. Users can use the SAP Web IDE on the SAP Business Technology Platform uses the SAP Business Technology Platform Mobile Services development tools plug-in to update the SAP Service and Asset Manager application or install additional components onto the application.
2. The SAP Web IDE can perform an *MDK Deploy and Activate* of the updated application definitions for SAP Service and Asset Manager to the AppUpdate feature from SAP Business Technology Platform Mobile Services.
3. SAP Service and Asset Manager periodically checks the AppUpdate feature for new definitions of SAP Service and Asset Manager, and retrieves the updates on demand.

7 Persona Overviews

7.1 Maintenance Technician Persona Overview (Standard, Professional, External)

Manage your existing work and asset data whether you are online, offline, or occasionally connected.

Key features:

- Demand processing with notifications
- Work execution with maintenance orders
- Capture asset measurement readings
- Asset information and asset history time, and material confirmations

Note

For the complete list of Maintenance Technician Standard, Professional and External features, see [SAP Service and Asset Manager Features and Personas Matrix \[page 5\]](#).

SAP Service and Asset Manager supports the following Maintenance Technician personas:

- **Maintenance Technician Professional:** Supports **all** Maintenance Technician features.
- **Maintenance Technician Standard:** Supports a reduced number of features compared to Professional persona.
- **Maintenance Technician External:**
 - Compared to Maintenance Technician Standard and Professional, it is a separate persona with **limited functionality**, created specifically for **external workers** within your organization.
 - You do not need to set up SAP User IDs for all your external workers.
 - This persona is required for the [FSM Crowd Service Integration](#) (FSM Crowd users do not exist in the SAP back end system).
 - The Maintenance Technician **External** and Field Service Technician **External** personas **cannot** be used with other personas. Users may be assigned only one of these personas and must not be assigned any additional personas.

Note

See the following documents for more information:

- To perform **Authorization Types**, so that mobile users can access specific persona(s) in SAP Service and Asset Manager, see *Persona-Based Authorizations* section in [Mobile User Essential Authorizations](#).
- To assign users to the Maintenance Technician Standard, Professional and External personas, see [Configuring Personas](#).
- To switch between personas in the application, see [Switching Between Personas](#).
- To use Maintenance Technician features, see [Maintenance Technician User Guide](#).
- See [FSM Integration Support Matrix](#) for the supported integration types.

7.2 Field Service Technician Persona Overview (Standard, Professional, External)

Use workflow steps to guide service technicians through the work execution process. Also, integrates with the Field Service Management solution, as part of the Customer Service module.

Key features:

- Follow a schedule and mapping directions to travel to assigned service order sites throughout the work day
- Service report generation during completion of service orders
- Expense and mileage reporting
- Update service order status changes and information on technician locations, which is transmitted to the Field Service Management planning board on the back end

Note

For the complete list of Field Service Technician Standard and Professional features, see [SAP Service and Asset Manager Features and Personas Matrix \[page 5\]](#).

SAP Service and Asset Manager supports the following Field Service Technician personas:

- **Field Service Technician Standard:**
 - Supports a reduced number of Field Service Technician features.
- **Field Service Technician Professional:**
 - The Field Service Technician **Professional** persona supports **all** Field Service Technician features on the **Customer Service back end** system and also [Meter Management](#).
 - The Field Service Technician **Professional** persona on the SAP S/4HANA back end system is currently **not supported**.
- **Field Service Technician External:**
 - Compared to Field Service Technician Standard and Professional, it is a separate persona with [limited functionality](#), created specifically for **external workers** within your organization.
 - You do not need to set up SAP User IDs for all your external workers.
 - This persona is required for the [FSM Crowd Service Integration](#) (FSM Crowd users do not exist in the SAP back end system).
 - The Maintenance Technician **External** and Field Service Technician **External** personas **cannot** be used with other personas. Users may be assigned only one of these personas and must not be assigned any additional personas.

Note

See the following documents for more information:

- To assign users to the Field Service Technician Standard and Professional personas, see [Configuring Personas](#).
- To switch between personas in the application, see [Switching Between Personas](#).
- To use Field Service Technician features, see [SAP Service and Asset Manager User Guide - Field Service Technician Persona](#).
- To configure Field Service Technician features on a **Customer Service back end**, see [Field Service Technician Configuration on a Customer Service Back End](#).

- To configure Field Service Technician features on an **SAP S/4HANA back end**, see [Field Service Technician Configuration on an SAP S/4HANA Back End](#).
- See [FSM Integration Support Matrix](#) for the supported integration types.

7.3 Inventory Clerk Persona Overview

The inventory clerk persona enables an inventory clerk to receive, issue, or transfer materials. The inventory clerk persona also supports batch-managed, valued, and serialized materials.

Note

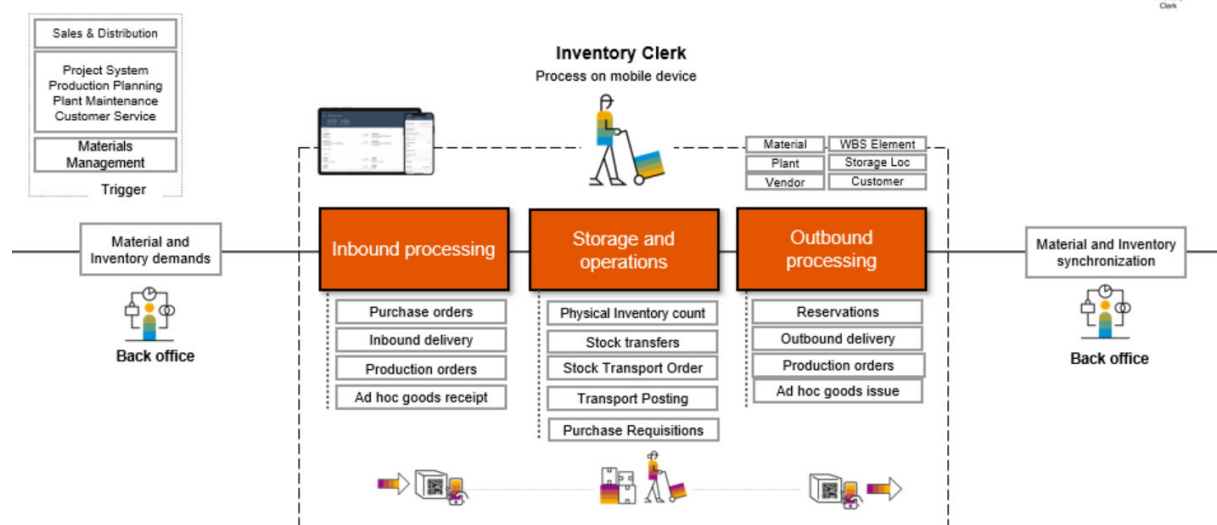
Persona support is available starting with the SAP Service and Asset Manager 2110 release. For more information about the goods movement or physical inventory process, refer to the *SAP Service and Asset Manager User Guide - Inventory Clerk Persona* documentation.

The inventory clerk persona supports the following functions:

- [Goods Receipt \[page 95\]](#)
- [Goods Issue \[page 96\]](#)
- [Stock Transfers \[page 96\]](#)
- [Transfer Postings \[page 97\]](#)
- [Stock Lookup \[page 97\]](#)
- [Physical Inventory \[page 97\]](#)
- [Purchase Requisitions \[page 98\]](#)
- [Goods Movement Cancellation and Reversal \[page 98\]](#)
- [Vendor Returns \[page 98\]](#)

Functional Overview for Inventory Clerk

Flexible and automated support in goods movements and stock management



The table below provides an overview of the movement types and functionality supported.

Process	Feature	Movement Type	Comments
Goods receipt	Purchase order	101, 103/105, and 107/109	2-step goods receipt
Goods receipt	Production order (item)	101	
Goods receipt	Inbound delivery		The Inbound Delivery feature differs for the Inventory Clerk and Extended Warehouse Clerk personas, since Inventory Clerk only supports Goods Receipt for Inbound Delivery.
Goods receipt	Stock transport order (STO)	101	
Goods receipt (Ad-hoc)	Goods receipt other	501 and 502 (reversal)	
Goods issue	Reservation	201, 221, 261, and 281	
Goods issue	Production order (component)	261	
Goods issue	Outbound delivery		
Goods issue	Stock transport order (STO)	351	
Goods issue (Ad-hoc)	Cost center, work order, project, network and sales order	201, 221, 261, 281, 231 E, 202, 222, 262, and 282	
Goods issue for scrapping	Goods issue for scrapping	551/552, 553, and 555	
Stock transfer	Plant to plant transfer	301, 303/305	2-step stock transfer
Stock transfer	Storage location to storage location	311, 313/315, and 411	2-step stock transfer
Vendor returns	Vendor returns (for purchase order)	122, 124	
Cancellation of goods movement	Cancellation of material document		
Physical inventory count	Physical inventory count (download and counts)		
Create physical inventory	Create a physical inventory document		
Stock overview	Stock overview (offline and online)		
Transfer postings	Transfer postings	321, 322, and 343	
Purchase requisitions	Create purchase requisitions		

Prerequisites to Implementing and Using the Inventory Clerk Persona

- A plant must be assigned to the logon user. Use the user parameter [WRK](#).
- You must assign the inventory clerk persona to the user. For more information, see [Configuring Personas](#).
- The user must have the authorization to create a material document and post inventory transactions. Please refer to the [SAP Service and Asset Manager Configuration Guide](#) for the list of supported transactions.

ⓘ Note

Currently, only the following types of special stock are supported:

- K – Consignment
- Q – Project
- P – Pipeline
- E – Sales Order Stock

7.3.1 Usability

As of 2405, the inventory clerk persona supports the following functions:

- Scan Download in the Overview and document details screens
[Using the Scanning Function](#)
- Adding a serial number by continuous scanning
[Goods Issue for a Single Item](#)
[Goods Issue without Reference](#)
[Goods Receipt for a Single Item](#)
[Goods Receipt without Reference](#)
- Adding a Signature
[Adding a Signature](#)
- Uploading and Downloading Attachments
[Attaching Files](#)
- Performing a Goods Issue and/or Goods Receipt for Multiple Items (Bulk Update)
[Goods Issue for Multiple Items](#)
[Goods Receipt for Multiple Items](#)

7.3.2 Goods Receipt

The following functions are supported as part of the goods receipt process:

- Goods receipt for purchase order (101 and 2 process steps 103,105, 107, and 109)
- Goods receipt for production order
- Goods receipt for stock transport order (STO)

- Goods receipt for inbound delivery
- Other goods receipts without reference (movement types 501 and 502 (reversal))

Note

The Inbound Delivery feature differs for the [Inventory Clerk](#) and [Extended Warehouse Clerk](#) personas, since Inventory Clerk only supports Goods Receipt for Inbound Delivery.

7.3.3 Goods Issue

The following functions are supported as part of the goods issue process:

- Goods issue for reservation and work order
- Goods issue for production order
- Goods issue for stock transport order
- Goods issue for outbound delivery
- Other goods issues:
 - Cost center (movement type 201)
 - Project (movement type 221 Q, 231 Q, 261 Q, 281 Q, 551 Q, 553 Q, and 555)
 - Work order (movement type 261)
 - Network (movement type 281)
 - Sales order (movement type 231 E)
- Goods issue for scrap (movement type 551 and reversal movement types)

Note

As of 2405, stock lookup supports a special (project, batch, consignment) stock along with the unrestricted stock at the storage location.

7.3.4 Stock Transfers

The following functions are supported as part of a stock transfer:

- Plant-to-plant transfer (movement type 301)
- Storage location to storage location transfer within plant (movement type 311)
- Stock transfer for sales order (movement type 301 E, 311 E, 313 E, 315 E, 321 E, and 343 E)
- Stock transfer for project (movement type 301 Q, 311 Q, 313 Q, 315 Q, 321 Q, and 343 Q)
- Stock transfer for consignment (movement type 311 K, 321 K, 343 K)

Note

Please verify the filters on the plants and storage location OMDOs to ensure the appropriate filters are configured. For example: the PLANT filter on SAM2310_PLANT is not restricted to the user parameter WRK.

Note that these OMDOs are shared across all personas, so consider the impact on other personas. Also consider the performance implications when changing filters. You can use user attributes or a filter handler class for assigning multiple plants.

7.3.5 Transfer Postings

The following functions are supported as part of a transfer posting:

- Transfer posting from quality inspection to unrestricted stock (movement type 321)
- Transfer posting from blocked stock to unrestricted stock (movement type 343)

7.3.6 Stock Lookup

The following functions are supported as part of a stock transfer:

- Offline stock lookup
- Online stock lookup

A mobile user can perform the following functions from the results of a stock lookup:

- Stock transfer
- Goods issues for cost center, project, work order, network and sales order

Note

As of 2405, stock lookup supports a special (project, batch, consignment) stock along with the unrestricted stock at the storage location.

7.3.7 Physical Inventory

The following functions are supported as part of a physical inventory:

- Downloading a physical inventory document and performing counts on the mobile client
- Creating a physical inventory document on the mobile client

Note

As of 2405, a separate physical inventory document is created in SAP backend for a special (consignment) stock. When counting, the vendor field is displayed in addition to existing fields.

Currently, creating a cycle count document is not supported.

7.3.8 Purchase Requisitions

The following functions are supported as part of a purchase requisition:

- Downloading and displaying a purchase requisition
- Creating a purchase request on the mobile client

7.3.9 Goods Movement Cancellation and Reversal

The following functions are supported as part of a goods movement cancellation (canceling a material document with reference to a document) and reversal (performing ad-hoc with the reverse movement type and no reference):

- Search for and download a material document to perform a reversal of goods movement
- Material document is also downloaded as a dependent object of other documents such as purchase orders or reservations). You can perform a cancellation and reversal against the downloaded material document.

7.3.10 Vendor Returns

The following functions are supported as part of a vendor returns:

- Download material document created for goods receipt of the purchase order to perform vendor returns

Note

When you download a purchase order, the documents associated with the material (goods receipts) are also downloaded. By default the filter `items_open_for_receipt` is set to true, so only purchase orders with open items are downloaded. To download fully received purchase orders, please relax the filter.

Note

Currently, returns from blocked stocks are not supported. To support the functionality, please relax the movement type filter.

7.4 Safety Technician Persona Overview

To ensure compliance with the numerous workplace safety conditions, workspace management must be accurately planned and consistently organized. With SAP Service and Asset Manager, you, as a Safety Technician, can control the safety management of personnel during work by implementing and maintaining of lockout and tagout procedures to prevent accidental or unauthorized access to dangerous energy sources. As the result, using the mobile app, you provide digital control of all the tagging and untagging procedures.

📘 Note

Lockout/Tagout (LOTO) is a safety procedure which involves the use of locks and tags to isolate energy sources and prevent unexpected start-up of machines or equipment. For more information, refer to [Lockout/Tagout](#) in *Work Clearance Management (PM-WCM)* documentation.

Key Features

The Safety Technician persona supports the following functions:

- [Record lockout and tagout activity while working with tags digitally](#)
- [Record untagging activity](#)

📘 Note

From 2505 release, limited support is available for the temporary untagging phase as well.

- Check the status of the following LOTO-related objects:
 - [Isolation Certificates](#)
 - [Work Permits](#)
 - [Work Orders](#)
 - [Work Approvals](#)
 - [Other Certificates](#)
 - [Operational Items](#)
 - [Equipments](#)
 - [Functional Locations](#)
- [Create notification](#)
- [Add new Operational Item to Isolation Certificate](#)
- [Issue approvals for Work Permits](#)
- [Add notes to Isolation Certificates and Work Permits](#)

📘 Note

- For a comprehensive list of features supported by the Safety Technician persona, see [SAP Service and Asset Manager Features and Personas Matrix \[page 5\]](#).
- For more information about configuring these features, see [Safety Technician Configuration](#).

7.5 Extended Warehouse Clerk Persona Overview

The Extended Warehouse Management (EWM) back end solution provides flexible, automated support for handling various goods movements and managing stocks in warehouse complexes. The system facilitates planned and efficient processing of all logistics processes in warehouses.

With the mobile SAP Service and Asset Manager app, you, as the Extended Warehouse Clerk persona, can optimize the use of various storage bins and stock movements. You can store stocks from several plants together in a randomly-managed warehouse. Using EWM, you can control and optimize various processes in the warehouse.

EWM integrates seamlessly with **Inventory Management** and **Delivery Processing**. Business processes triggered in other SAP Service and Asset Manager components result in physical goods movements in warehouses. You use EWM to organize, control, and monitor these goods movements.

Key Features:

The Extended Warehouse Clerk persona supports the following functions:

- Managing and optimizing storage bins using fetch, display, and claim or release options.
- Executing warehouse tasks with fetch, display, and confirmation options.
- Managing warehouse orders with fetch, display, and confirmation options.
- Managing physical inventory and counting capabilities.
- Planing and monitoring goods movements and warehouse stocks.
- Managing inbound deliveries and inbound delivery document items, and executing tasks accurately during the receiving process.

7.6 Field Logistics Overview

Field Logistics deals with the movement of maintenance products between the supply base and the remote location.

With the mobile SAP Service and Asset Manager app, you, as the Field Logistics persona, can manage the movement of goods in two scenarios:

- Forwarding scenarios: when moving products from a base location to a remote location
- Returning scenarios: when moving products from a remote location to a base location, such as for repair, recertification, scrapping, or storage.

These scenarios apply to both own-product and service-related processes:

- Owned products process: when you purchase and move your own items from a base to a remote location where the required work or services must be performed
- Service process: when you order and move vendor-owned (rental or third-party) items from a base to a remote location where the required work or services must be performed.

Key Features:

The Field Logistics persona supports the following functions:

- Managing logistics for stock, non-stock, and supplier items
- Receiving items at remote plants, including containers, delivery items, handling units, and package items
- Downloading voyages and set them to arrive
- Scanning QR-codes for containers, handling units, delivery items, and voyage numbers.

8 SAP On-Premise Environment

In order to connect to an SAP back end, a compatible on-premise environment with the SAP Mobile Add-On must be available.

The SAP back end communicates with the SAP Business Technology Platform via the Cloud Connector. You can find more information on the Cloud Connector in the [SAP Business Technology Platform Connectivity](#) manual.

8.1 SAP Mobile Add-On for ERP

Add the SAP Mobile Add-On for SAP ERP systems alongside the requisite service packs in order to provide the required OData services for specific versions of SAP Service and Asset Manager.

Depending on the version of SAP Service and Asset Manager, the following versions of the SAP Mobile Add-On are available for compatible SAP ECC 6.0 EHP7 SP14 systems and newer:

Add-On Component	SAM 2.0	SAM 3.0	SAM 4.0	SAM 1911
SMFND 630_740 SP01	Supported	Not supported	Not supported	Not supported
SMERP 630_740 SP01				
SMISU 630_740 SP01				
SMFND 630_740 SP02	Supported	Supported	Not supported	Not supported
SMERP 630_740 SP02				
SMISU 630_740 SP02				
SM3ND 630_740 SP02	Supported	Supported	Supported	Not supported
SMERP 630_740 SP03				
SMISU 630_740 SP03				

Ensure that the corresponding SAP Mobile Add-On and service packs are installed for the SAP Service and Asset Manager application you wish to run. For detailed information and instructions regarding the installation of the SAP Mobile Add-On for ECC 6.0 Systems, see the [Mobile Add-On for ERP Installation Guide](#), or check primary note [2577248](#).

After downloading the files for the SAP Mobile Add-On desired support packages from the SAP Software Download Center, load the mobile add-on onto your system through the add-on manager, using the transaction code **SAINT**. Once the add-on is installed, load the support packages into your system through the Support Package Manager (accessed through transaction code **SPAM**).

Once the SAP Mobile Add-On and requisite support packages have been installed, follow the [Post Installation - Required](#) topic to fully configure the SAP Mobile Add-On for ERP. Ensure that the OData Service is assigned in /

IWFND/MAINT_SERVICE and the B/C set is activated for the given version of SAP Service and Asset Manager. After following the topic, use the following checklist to ensure that the mobile application integration framework is properly installed and configured:

1. Ensure that the requisite Web Dynpro that controls the behavior of the SAP Mobile Add-On are properly activated.
 1. Transactions /SYCLO/CONFIGPANEL and /SYCLO/ADMIN open the Mobile Application Integration Framework Configuration Panel and Administration Panel for the desired back end SAP ERP system.
2. Ensure that the requisite B/C sets related to the desired version of the SAP Mobile Add-On are installed and activated.
 1. If these B/C sets have been properly activated, application configuration for the desired SAP Service and Asset Manager version appears in the transaction /SYCLO/CONFIGPANEL under *Mobile Application Parameters*.
3. Ensure that the OData service for the desired SAP Service and Asset Manager application is activated and assigned to the *Mobile Application OData Service Assignment*.
 1. The requisite OData service appears in the *Mobile Application OData Service Assignment* in the transaction /SYCLO/CONFIGPANEL and is assigned to the mobile application.
 2. The requisite OData service will also appear in the listing of OData services provided by the SAP Gateway system, found in transaction /IWFND/MAINT_SERVICE.
 1. Configure the alias assignment in the /IWFND/MAINT_SERVICE transaction. By selecting the desired OData service, the bottom-right panel informs administrators which back end connection alias is used for the connection to the backend SAP Mobile Add-On services.
 2. Perform a quick test of the OData service to ensure the proper OData service document is being returned by the service:
After selecting the OData service, the bottom-right panel includes a link to an internal test using the gateway client. By using the internal gateway client tool with the HTTPS connection option, system administrators can ensure that their connections are properly reaching the correct back-end system from the SAP gateway and retrieving data for the proper data service providers for SAP Service and Asset Manager.
 3. Ensure that the idempotency jobs are set up from the SPRO configuration of the SAP gateway system, as SAP Service and Asset Manager relies on idempotency in HTTP OData services to ensure data integrity.
4. Ensure that the SAP back-end system is set up to allow authentication of HTTPS calls from the Cloud Connector via principal propagation.

When the SAP Mobile Add-On has been set up correctly, the OData service starts returning data in the SAP Gateway client, accessible from transaction /IWFND/GW_CLIENT.

8.2 Mobile Add-On for SAP S/4HANA

Add the SAP Mobile Add-On for SAP S/4HANA systems alongside the requisite service packs in order to provide the required OData services for specific versions of SAP Service and Asset Manager.

The following versions of Mobile Add-On for SAP S/4HANA are available for compatible SAP S/4HANA 1610 FPS01 systems and newer:

Add-On Component	SAM 1.0	SAM 1.1	SAM 2.0	SAM 3.0	SAM 4.0	SAM 1911
S4MFND 100 S4MERP 100	Supported	Not supported	Not supported	Not supported	Not supported	Not supported
S4MFND 100 SP01 S4MERP 100 SP01	Not supported	Supported	Not supported	Not supported	Not supported	Not supported
S4MFND 100 SP02 S4MERP 100 SP02 S4MISU 100	Not supported	Supported	Supported	Not supported	Not supported	Not supported
S4MFND 100 SP03 S4MERP 100 SP03 S4MISU 100 SP01	Not supported	Supported	Supported	Supported	Not supported	Not supported
S4MFND 100 SP04 S4MERP 100 SP04 S4MISU 100 SP02	Not supported	Supported	Supported	Supported	Supported	Not supported

Ensure that the corresponding SAP Mobile Add-On and service packs are installed for the SAP Service and Asset Manager application you wish to run. For detailed information and instructions regarding the installation of the SAP Mobile Add-On for 1610 FPS01 systems, see the [Mobile Add-On for S/4HANA Installation Guide](#), or check primary note [2493602](#).

After downloading the files for the SAP Mobile Add-On desired support packages from the SAP Software Download Center, load the mobile add-on onto your system through the add-on manager, using the transaction

code **SAINT**. Once the add-on is installed, load the support packages into your system through the Support Package Manager (accessed through transaction code **SPAM**).

Once the SAP Mobile Add-On and requisite support packages have been installed, follow the [Post Installation - Required](#) topic to fully configure the Mobile Add-On for SAP S/4HANA. Ensure that the OData Service is assigned in **/IWFND/MAINT_SERVICE** and the B/C set is activated for the given version of SAP Service and Asset Manager. After following the topic, use the following checklist to ensure that the mobile application integration framework is properly installed and configured:

1. Ensure that the requisite Web Dynpro that controls the behavior of the SAP Mobile Add-On are properly activated.
 1. Transactions **/SYCLO/CONFIGPANEL** and **/SYCLO/ADMIN** open the Mobile Application Integration Framework Configuration Panel and Administration Panel for the desired back end SAP S/4HANA system.
2. Ensure that the requisite B/C sets related to the desired version of the SAP Mobile Add-On are installed and activated.
 1. If these B/C sets have been properly activated, application configuration for the desired SAP Service and Asset Manager version appears in the transaction **/SYCLO/CONFIGPANEL** under [Mobile Application Parameters](#).
3. Ensure that the OData service for the desired SAP Service and Asset Manager application is activated and assigned to the [Mobile Application OData Service Assignment](#).
 1. The requisite OData service appears in the [Mobile Application OData Service Assignment](#) in the transaction **/SYCLO/CONFIGPANEL** and is assigned to the mobile application.
 2. The requisite OData service will also appear in the listing of OData services provided by the SAP Gateway system, found in transaction **/IWFND/MAINT_SERVICE**.
 1. Configure the alias assignment in the **/IWFND/MAINT_SERVICE** transaction. By selecting the desired OData service, the bottom-right panel informs administrators which back end connection alias is used for the connection to the backend SAP Mobile Add-On services.
 2. Perform a quick test of the OData service to ensure the proper OData service document is being returned by the service:
After selecting the OData service, the bottom-right panel includes a link to an internal test using the gateway client. By using the internal gateway client tool with the HTTPS connection option, system administrators can ensure that their connections are properly reaching the correct back-end system from the SAP gateway and retrieving data for the proper data service providers for SAP Service and Asset Manager.
 3. Ensure that the idempotency jobs are set up from the SPRO configuration of the SAP gateway system, as SAP Service and Asset Manager relies on idempotency in HTTP OData services to ensure data integrity.
4. Ensure that the SAP back-end system is set up to allow authentication of HTTPS calls from the Cloud Connector via principal propagation.

When the SAP Mobile Add-On has been set up correctly, the OData service starts returning data in the SAP Gateway client, accessible from transaction **/IWFND/GW_CLIENT**.

9 SAP Business Technology Platform Environment

The SAP Business Technology Platform is an essential component of the end-to-end landscape for the SAP Service and Asset Manager application. You can manage all of the separate components and features used by the SAP Service and Asset Manager from the SAP Business Technology Platform. These components and features are easily configured, including offline OData services, APNs or GCP push services, SAP on-premise OData connections, Mobile Development Kit customization and deployment options, and others.

For more details regarding purchasing access licenses to the SAP Business Technology Platform, contact your SAP account representative.

Before continuing, ensure that you have access to an SAP Business Technology Platform global account, as well as licenses and access for SAP Mobile Services, the Mobile Development Kit, and the SAP Business Application Studio full stack edition. Once you obtain the licenses and access for these items, create a subaccount on the region of your choice under the [NEO](#) environment. Check to ensure that all of these services are provisioned to the subaccount. If you're unable to establish a connection to Mobile Services or the SAP Business Application Studio with the Mobile Development Kit plug-in, contact your SAP Business Technology Platform support representative to determine how to request these features.

📌 Note

- For more information, see [SAP Business Technology Platform](#).
- SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).

9.1 SAP Business Technology Platform Mobile Services Overview

Your SAP Service and Asset Manager installation needs either a Cloud Foundry or a Neo SAP Business Technology Platform Mobile Services (SAP BTP services) installation and configuration.

For more information regarding what services are required for your Cloud Foundry setup, see the official portal page for [SAP Business Technology Platform \(SAP BTP\)](#).

→ Remember

SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).

9.1.1 SAP BTP services - Setting Up a Neo Environment

Establish an SAP Business Technology Platform Neo account with the requisite services.

Connecting the SAP Business Technology Platform to SAP BTP services Neo

→ Remember

SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).

To connect to SAP BTP services Neo:

1. Navigate to the [Services](#) tab of the SAP Business Technology Platform subaccount with [Mobile Services](#) provisioned on it.
2. Enter the configuration for mobile services by selecting the [Mobile Services, Users](#) service. Ensure that the status is set to [Enabled](#).
3. Once the service is enabled, select the [Configure Mobile Services, Users](#) option. Navigate to the [Roles](#) tab in the configuration.
4. Add users that need access to the connection settings of the mobile application to the [Administrator](#) role to allow them to manage the connection between the SAP Service and Asset Manager application and the requisite components that it uses on the SAP Business Technology Platform.

Configuring Preset Templates in SAP BTP services

For more information on setting up the SAP Service and Asset Manager application with the SAP Business Technology Platform, see the official documentation for the [SAP BTP Neo Environment](#).

To quickly get connected in SAP BTP services, some preset templates are provided for apps built on the Mobile Development Kit, including SAP Service and Asset Manager:

1. In SAP BTP services, create a destination that utilizes the Cloud Connector to create a connection to the SAP on-premise environment.
 1. In the default metadata that is shipped with SAP Service and Asset Manager, the destination names that the mobile application is looking for are [DEST_SAM<version number>_PPROP](#). Therefore, use this naming convention for destinations used with standard installations of the SAP Service and Asset Manager application.
 2. The SAP Service and Asset Manager application currently only supports connections to on-premise environments. Ensure that the Cloud Connector is properly configured by creating the connection based on the virtualhost information in the Cloud Connector.
 3. The SAP Service and Asset Manager application has different performance and timing requirements depending on the on-premise system being used:
 1. For SAP ERP back ends and landscapes using the Gateway hub environment, set the timeout settings for the connection to at least 20 minutes.

2. For SAP S/4HANA back ends with embedded SAP Gateways, set the timeout settings for the connection to 10 minutes at a minimum.
 4. In the custom header section, include the header `sap-client = <on-premise gateway client #>` to prevent potential issues from a misconfigured default client configuration.
 5. Manually configure URL rewriting only if the Cloud Connector is set with a virtualhost that differs from the internal host. To manually configure URL rewriting, set the inbound and outbound rewrite rules to replace outbound internal host links with virtual host links, and replace inbound virtual host links with internal host links.
 6. For the Authentication method, the SAP Service and Asset Manager application currently only supports authentication via principal propagation. Ensure that the principal propagation mapping is set up on your Cloud Connector and SAP on-premise environment. Also ensure that the user names mapped in the back end matches the usernames of the IDP assigned to the SAP Business Technology Platform.
2. Once the destination is created, create a mobile application definition under the section [Applications](#) in the tab [Native/hybrid](#):
 1. When creating a mobile application definition, create it using the Mobile Development Kit template.
 2. Give the app a meaningful name and an easy to identify AppID. Make note of the AppID.
 3. In the app definitions, select the [connections](#) feature. Add the destination that was created in the previous step to establish the connection.
Check the validity of the connection using the icon to the left of the [ping](#) button. If the connection is properly configured, it returns the service document from the SAP on-premise environment.
 4. In the app definitions, select the [offline](#) feature. Upload the OData offline configuration that matches your mobile app version and on-premise landscape. This is required for proper calculation of data objects sent to the device.
 1. If you don't already have a configuration, there's one included in the branding metadata available for download through instructions found in the [Building the SAP Asset Manager Client](#) topic.
 2. To make changes to this configuration, find more information regarding the behavior of the OData offline component in the topic [Defining Offline Settings for Applications](#).
 3. In the app definitions, select the [security](#) feature. Ensure that there is an oAuth client established. Note the oAuth client ID, redirect URL, Token URL, and Authorization URL. These are used to connect your device to the app definitions of the SAP Business Technology Platform.
 4. In the app definitions, check the [APIs](#) tab to retrieve the server URL. Note of this URL, as it's used to connect your device to the app definitions of the SAP Business Technology Platform.
 3. After configuring the application and destination, enable logging for the app as it isn't enabled by default. Navigate to the [Settings](#) section. Then go to the [Log Settings](#) tab, and enable the event logs for all the components for SAP BTP services.
 1. To view logs, check the [Analytics](#) section of the [Logs](#) tab.
 2. Event logs show events occurring on the SAP BTP services instance based on the log levels that were activated in the settings section. You can find common errors with configuration by analyzing these logs

9.1.2 Setting Up and Deploying an App in Cloud Foundry

1. [Creating a Cloud Foundry Subaccount Using a SAP Business Technology Platform Booster \[page 109\]](#)
Establish an SAP Business Technology Platform Cloud Foundry account with the requisite individual services using the Boosters tile.
2. [Opening the SAP BTP services App Creator \[page 114\]](#)
3. [Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application \[page 118\]](#)
4. [Configuring Customer Usage Metrics \[page 130\]](#)
All applications using MAIF require reporting of customer usage metrics to ensure customers are not exceeding their licensed user counts based on personas.

9.1.2.1 Creating a Cloud Foundry Subaccount Using a SAP Business Technology Platform Booster

Establish an SAP Business Technology Platform Cloud Foundry account with the requisite individual services using the Boosters tile.

Context

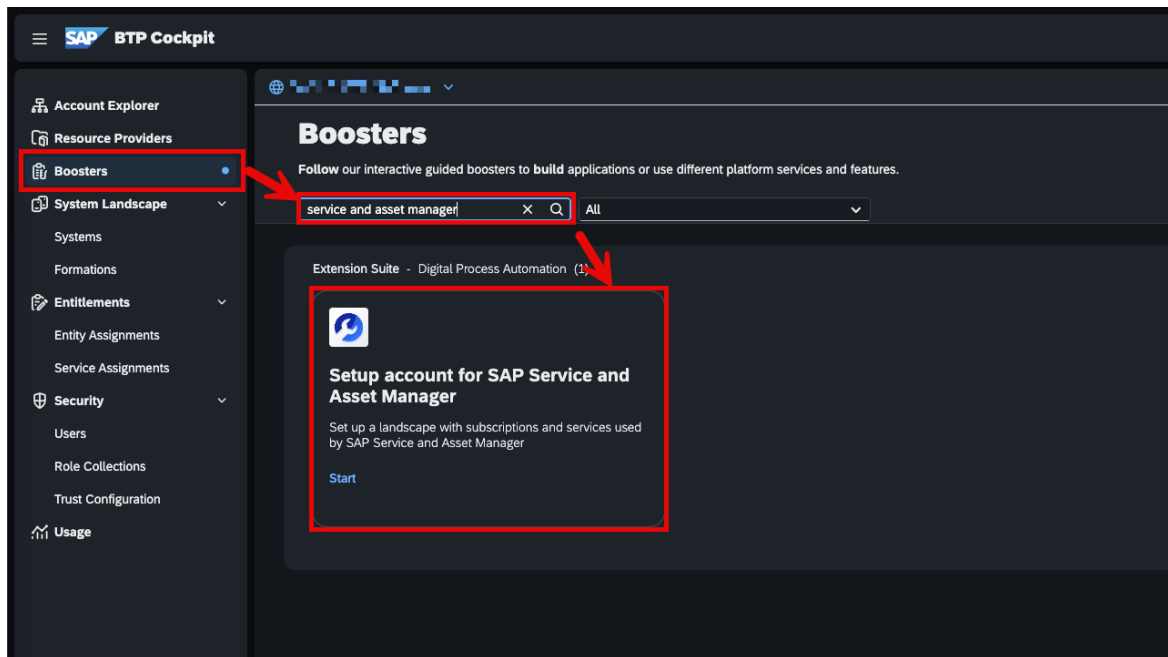
Administrators of SAP BTP global accounts that have purchased licenses and entitlements for SAP Service and Asset Manager can use the SAP BTP Boosters tile. The booster quickly creates a SAP BTP subaccount with Cloud Foundry-enabled features. It creates the required SAP BTP configurations; however, you will still need to manually add your own connections to your back end on-premise system.

📘 Note

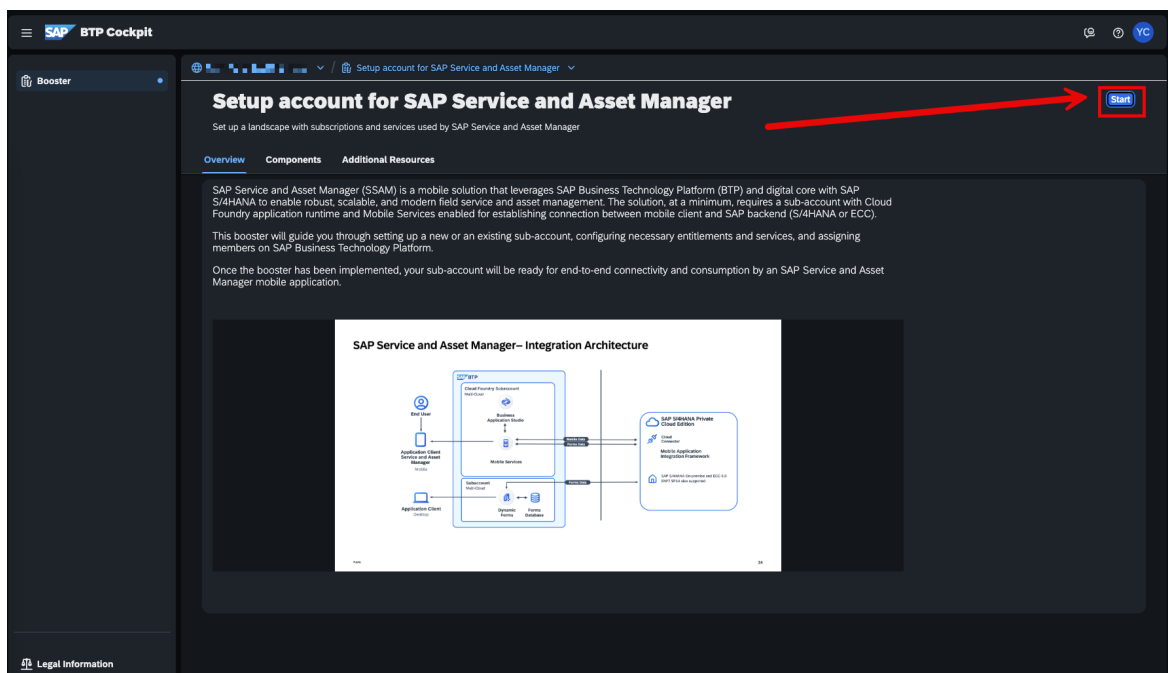
- If your environment is more complex, use the manual [SAP BTP services - Setting Up a Cloud Foundry Environment, Single Instance](#) procedure found in the *Appendix* of the *SAP Service and Asset Manager Installation Guide*.
- For detailed information on Cloud Foundry, see the [Enabling Mobile Services](#) page.
- For additional information on entitlements, see the note found in the *Prerequisites for SAP Service and Asset Manager Application Installation* subsection in the [SAP Service and Asset Manager Installation Prerequisites](#) topic.

Procedure

1. Open the SAP BTP cockpit and navigate to the [Boosters](#) section. Perform a search for **SAP Service and Asset Manager**. Then select the **Setup account for SAP Service and Asset Manager** when it displays.



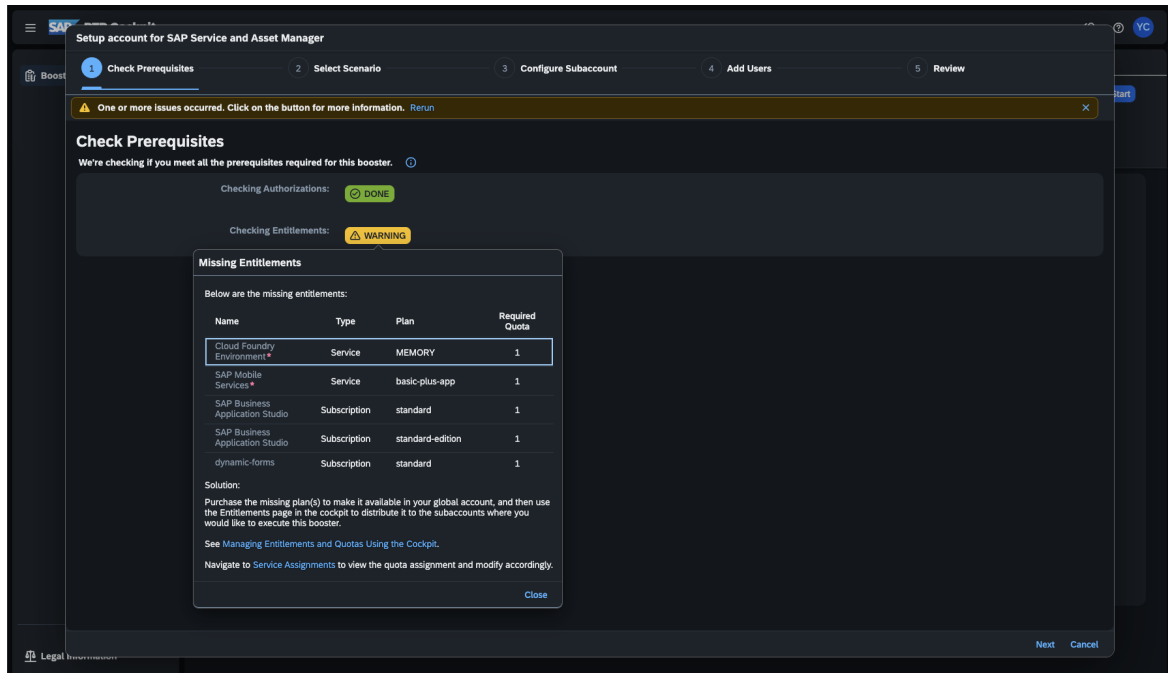
2. Select the [Start](#) button on the booster overview page that displays.



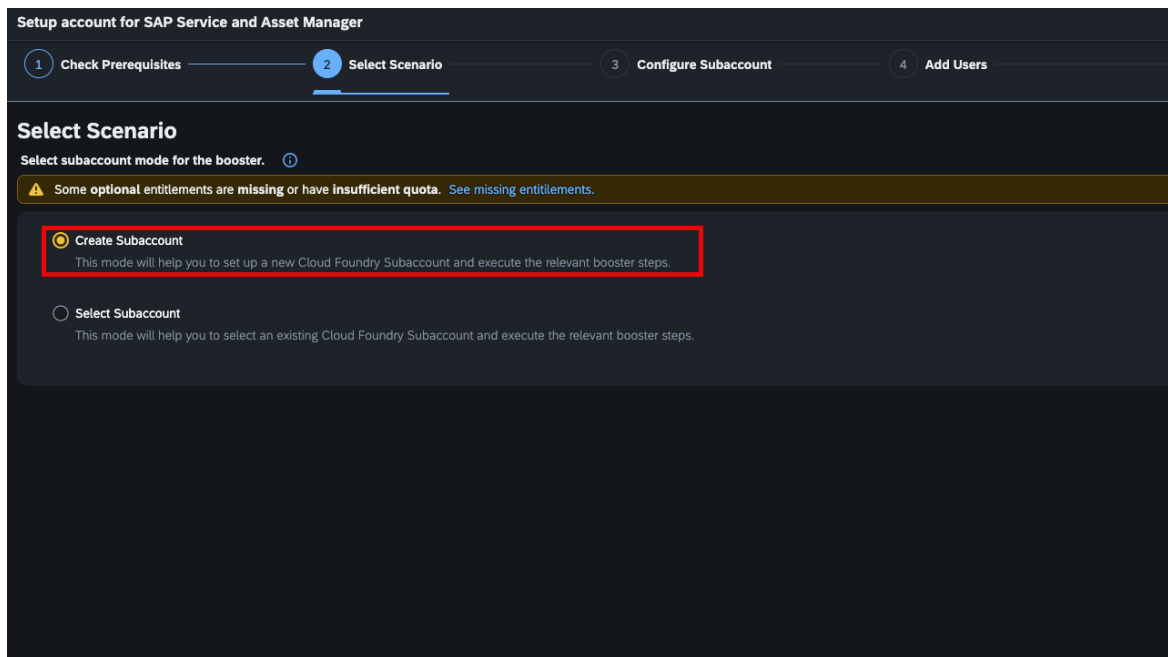
The booster begins a check to ensure the licenses and authorizations in the global account are ready to run the booster. As long as the checks pass with *Done* or *Warning*, the booster can continue running.

Note

If there is a *Warning* about *Missing Licenses* or *Missing Entitlements*, please speak to your SAP account representative for the correct course of action.



3. Tap *Next* to continue. Then select *Create Subaccount* and click *Next*.



The Configure Subaccount screen displays.

4. Remove any features that you don't need by clicking the trashcan icon next to the feature. You can also change any of the default input names in the fields. Select a Cloud Foundry provider and region in which to operate the subaccount. Then select *Next*.

Setup account for SAP Service and Asset Manager

1 Check Prerequisites 2 Select Scenario 3 **Configure Subaccount** 4 Add Users 5 Review

Configure Subaccount

Configure your Cloud Foundry Subaccount and Space. ⓘ

Entitlements: Reset

Service	Plan	Required Quota	Remaining Quota	Action
Cloud Foundry Environment*	MEMORY	1	899	
Mobile Services*	basic-plus-app	1	3	
SAP Business Application Studio	standard-edition	1	0	
dynamic-forms	standard	1	limited	

The service plans that are required for running this project and their required quota. The required quota is deducted from the available quota for each service in your global account.

Subaccount Name: *

The name for your new subaccount can contain up to 255 characters.

Provider: * **Amazon Web Services (AWS)**

Select the infrastructure provider of the new subaccount.

Region: * **Europe (Frankfurt) AWS 2**

Select the region in which to create the new subaccount.

Subdomain: *

The subdomain of your subaccount must be unique and can contain up to 63 letters (a-z or A-Z), digits (0-9), and hyphens (not at the start or end).

Org Name: *

The name for the Cloud Foundry org can contain up to 255 characters.

Previous **Next** Cancel

The Add Users page displays.

5. Select a custom identity provider, if required. Add your administrator users and developer users to the corresponding fields, then click [Next](#).

Setup account for SAP Service and Asset Manager

1 Check Prerequisites 2 Select Scenario 3 Configure Subaccount 4 **Add Users** 5 Review

Add Users

Enter the details of additional users who will work on your development project and assign them to the relevant roles. ⓘ

The Platform Identity Provider displays all the Custom Identity Authentication Service (IAS) tenants configured in your global account. The booster will use it to assign cockpit platform roles like "Subaccount Administrator". Similarly, the Application Identity Provider displays all the Custom IAS tenants associated with the selected subaccount. This IAS tenant will be used by application users having application roles like "BuildAppsDeveloper". X

Custom Identity Provider for Platform Users:

Custom Identity Provider for Applications: **accounts.sap.com**

Administrators:

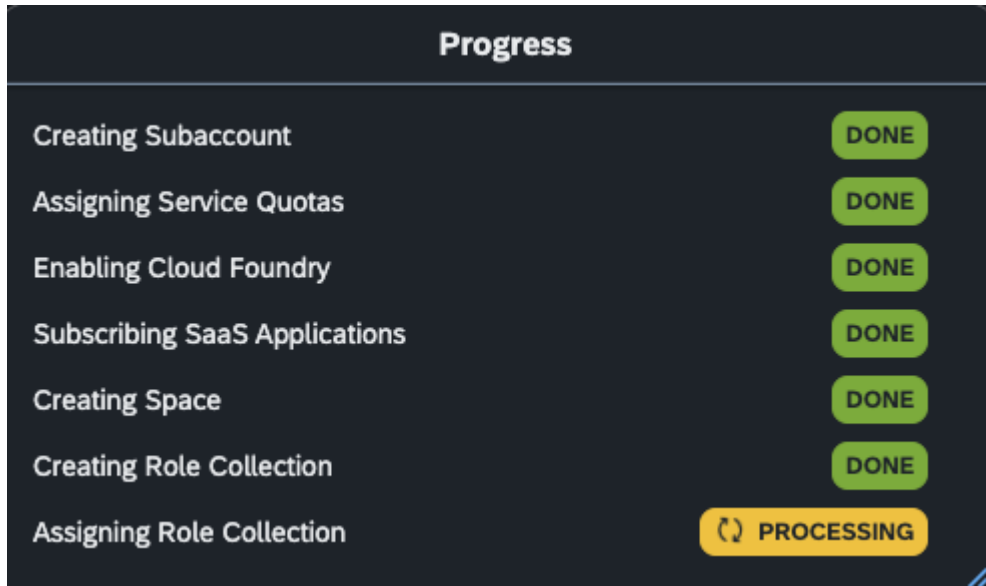
Administrators will be assigned to the org manager, space manager roles and Service_Asset_Manager_Administrator, Subaccount Administrator role collection(s). The logged in user 'ying.chen03@sap.com' will be added by default as an Administrator.

Developers:

Developers will be assigned to the space developer role and Service_Asset_Manager_Developer, Subaccount Viewer role collection(s). The logged in user 'ying.chen03@sap.com' will be added by default as a Developer.

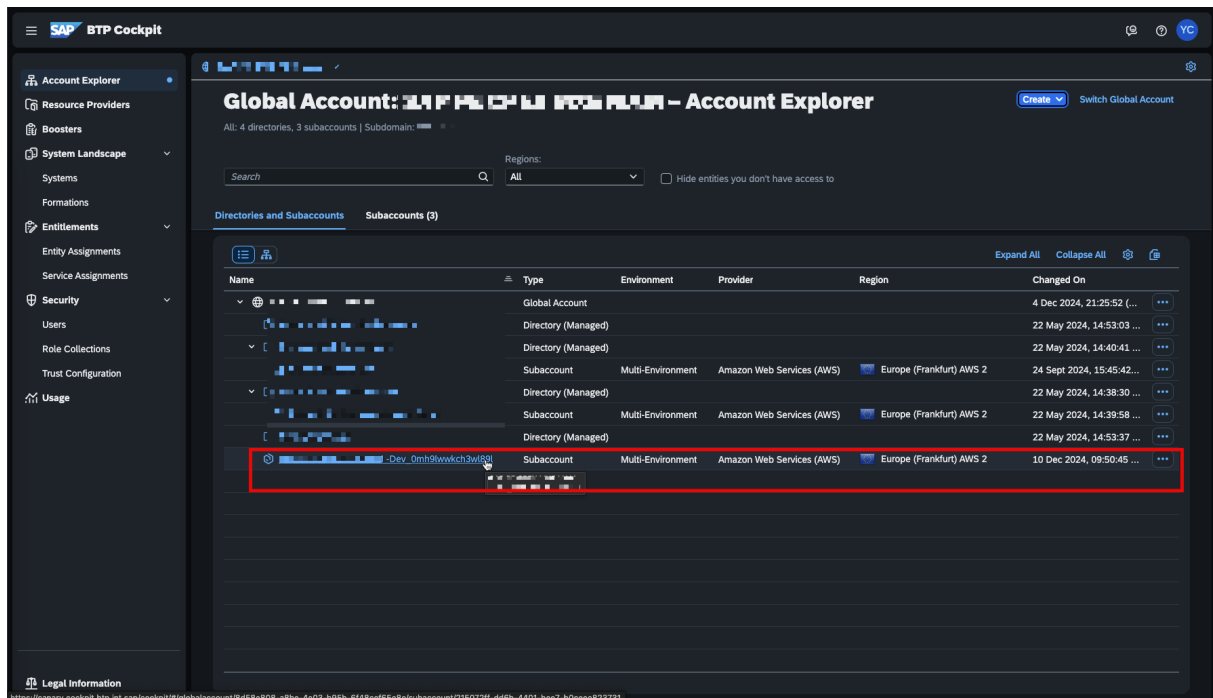
Previous **Next** Cancel

6. Confirm that all your subaccount details are correct, then select [Finish](#).
A popup appears that updates in real time as the booster creates the subaccount and prepares it for use with the application.



Results

Once the subaccount creation is complete, your new subaccount will appear under the [Account Explorer](#) section.



Next Steps

Continue on to the [Opening the SAP BTP services App Creator \[page 114\]](#) and [Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application \[page 118\]](#) topics to create your app in your subaccount.

Task overview: [Setting Up and Deploying an App in Cloud Foundry \[page 108\]](#)

Next: [Opening the SAP BTP services App Creator \[page 114\]](#)

9.1.2.2 Opening the SAP BTP services App Creator

In the SAP GUI, use transaction [/MERP/CPms_appcreate](#). Note that if the transaction is unavailable, reach the application through transaction [SE38](#) and execute the program [/MERP/CORE_CPMS_APPCREATE_PROG](#).

The app create program opens in standard mode.

Caution

Please note that currently standard mode is deprecated. This issue is planned to be fixed with 2410 release.

Note

For most applications, standard mode is sufficient for successful execution of mobile app generation.

SAP Mobile Services App Creator for SAP Service and Asset Manager

Advanced Mode

Business Technology Platform environment type

☒ Cloud Foundry
☐ Neo

Mobile Services Connection Information

MS Admin API or MW Server GUID

Mobile Application Integration Framework oData Service

oData Service Mobile App
oData Service Technical Name
oData Service Group Version

Mobile Services Application Settings

MS Application ID
MS Application Name
MS Application Description
MS Vendor Name
MS Application Timeout

Mobile Services Offline oData settings

☐ Enable Multiple Threads

Mobile Services Connection Configuration

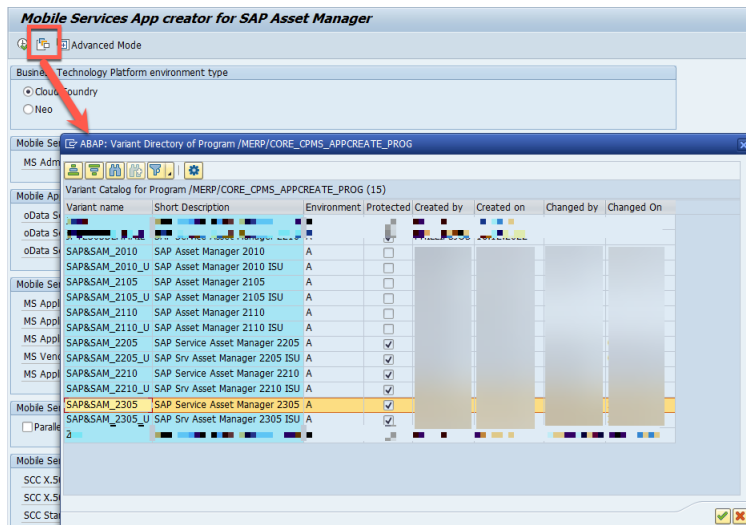
SCC X.509 Virtual Host
SCC X.509 Virtual Port
Cloud Connector Location ID

Schedule Usage Metering Background Job

Background Job User

Selecting the Proper Variant and Mode

If needed, open the list of variants available for the application and select a variant specific to the version of the installed Mobile Application Integration Framework application.



Once you've selected the correct variant, determine if you need to use advanced mode rather than standard mode. Advanced mode is necessary if the SAP Gateway being called by SAP BTP services is not using the default [SAP-Client](#) to retrieve the data for use with the corresponding application.

Mobile Services App creator for SAP Asset Manager

 Standard Mode

Business Technology Platform environment type

- ☒ Cloud Foundry
☐ Neo

Mobile Services Connection Information

MS Admin API or MW Server GUID

Mobile Application Integration Framework oData Service

oData Service Mobile App
oData Service Technical Name
oData Service Group Version

Mobile Services Application Settings

MS Application ID
MS Application Name
MS Application Description
MS Vendor Name
MS Application Timeout
MDK Onboarding URI Schema

Mobile Services Offline oData settings

oDataOffline Destination
oDataOffline Request Format
oDataOffline Content ID Loc
oDataOffline Delta Format
☒ oDataOffline Refresh in Order
oDataOffline Delta Resend
☐ oDataOffline Prepop DB
☒ oDataOffline Case Sensitivity
oDataOffline Prepop Interval
oDataOffline Offline Collation
☐ oDataOffline DateTime Offset
oDataOffline Change Expiry
☐ oDataOffline Max Length Omit
oDataOffline Refresh Interval
☐ Parallelized Gateway
oDataOffline DT Lifetime
oDataOffline Cache Expiration
oDataOffline Delta Tracking
Application Tag

Mobile Services Push Configuration

- ☒ Default MS Push Settings
☐ Custom MS Push Settings

Mobile Services Connection Configuration

☐ Offline Destination Only
☒ Offline & Online Destinations
SCC X.509 Virtual Host
SCC X.509 Virtual Port
SCC Standard Virtual Host
SCC Standard Virtual Port
Cloud Connector Location ID
Gateway Service User
Gateway Service Password

Mobile Services Offline Destination Configuration

☐ Username Propagation
☐ Trust All Flag
☐ Destination Preemptive flag
☐ Alternative Host Key Flag
☒ Use Cloud Connector
Mobile Destination Name
Destination Max Connections
Destination Connection Timeout
Destination Rewrite Mode
SSO Method
Throttling Threshold
Virus Scan Type
Destination Max Request Size
Destination Rewrite Rules
Destination Headers
Hostname Verifier Type

Mobile Services Online Destination Configuration

☐ Username Propagation
☐ Trust All Flag
☐ Destination Preemptive flag
☐ Alternative Host Key Flag
☒ Use Cloud Connector
Mobile Destination Name
Destination Max Connections
Destination Connection Timeout
Destination Rewrite Mode
SSO Method
Throttling Threshold
Virus Scan Type
Destination Max Request Size
Destination Rewrite Rules
Destination Headers

Parent topic: [Setting Up and Deploying an App in Cloud Foundry \[page 108\]](#)

Previous task: [Creating a Cloud Foundry Subaccount Using a SAP Business Technology Platform Booster \[page 109\]](#)

Next: [Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application \[page 118\]](#)

9.1.2.3 Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application

Before you use the App Creator, be sure you've read and are following [2978807](#): MAIF to CPms Multi-Virtualhost Support.

The Mobile Application Integration Framework (MAIF) includes a tool to automate the integration of SAP BTP services on Cloud Foundry alongside SAP Service and Asset Manager on-premise definitions. The tool is available in the following versions of MAIF:

App Creator Tool Availability

SAP Version	Mobile Application Integration Framework
S4HANA 2021 (or above)	Included
S4HANA 2020	Included
S4HANA 1909 SPS 03	Included
S4HANA 1809	SAP Mobile Add-On SP08
S4HANA 1709	SAP Mobile Add-On SP08
S4HANA 1610 FPS 01	SAP Mobile Add-On SP08
SAP ECC 6 EHP 8	SAP Mobile Add-On SP07
SAP ECC 6 EHP 7 SP 14	SAP Mobile Add-On SP07

See the following subtopics for detailed information on the fields shown in the App Creator program:

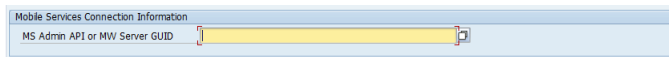
- [Defining the SAP BTP services Connection Information \[page 119\]](#)
- [Defining the Mobile Application Integration Framework OData Service \[page 122\]](#)
- [Defining the SAP BTP services Application Settings \[page 122\]](#)
- [Defining the Mobile Service Offline OData Settings \[page 123\]](#)
- [Defining the Mobile Services Connection Configuration \[page 125\]](#)

Parent topic: [Setting Up and Deploying an App in Cloud Foundry \[page 108\]](#)

Previous: [Opening the SAP BTP services App Creator \[page 114\]](#)

Next: [Configuring Customer Usage Metrics \[page 130\]](#)

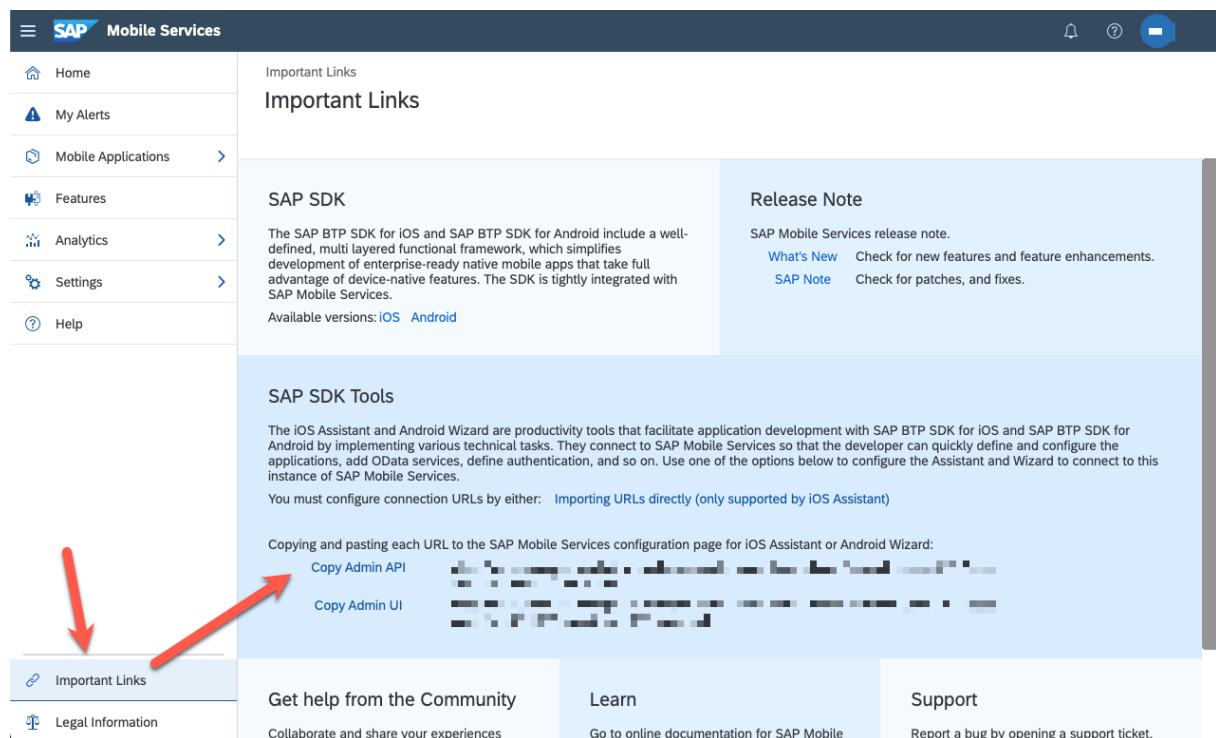
9.1.2.3.1 Defining the SAP BTP services Connection Information



There are two ways to use the application:

- Direct connection: If your back end system allows outbound HTTPs connections, you can connect directly to SAP BTP services
- RFC connection: Use this method if your back end system is locked behind a firewall that disallows direct outbound HTTPs connections and needs to be routed through a proxy. Establishing an RFC connection requires populating the *Mobile Services Connection Information* with the *Middleware Server GUID*.

Retrieve the *Admin API* from the *Important Links* section, regardless of which method you're using to connect.



Option 1: Directly Connecting to SAP BTP services from the Back End System

For systems that do not require outbound proxies or special certificate configurations, you can copy the [Admin API](#) directly from the [Important Links](#) section of SAP BTP services. Paste the Admin API into the [MS Admin API](#) or [MW Server GUID](#) field.

Option 2: Establishing RFC Connection Information for the SAP BTP services App Creator

Note

To correctly configure metrics reporting, complete the [RFC Connection: Integrating SAP Cloud Reporting for MAIF-Based Mobile Applications on SAP BTP services for Cloud Foundry \[page 132\]](#) procedure before establishing an RFC connection through the App Creator program.

An option is available to define the special settings in an RFC connection using transaction [SM59](#) that wraps the connection with the middleware server GUID to reference by the calling application. Use this option for systems that require outbound proxies or special certificate configurations not captured by the standard direct HTTPs outbound communication methods that SAP back end systems use.

The middleware server GUID is generated when a middleware server is defined in the Administration Portal. The defined middleware server should point to the MS Admin API URL, with [/app](#) appended.

Use the F4 help to return a list of all defined middleware servers.

1. Open the [Configuration of RFC Connections](#) using transaction [SM59](#).
2. Create an RFC destination of type [G](#):
 1. Retrieve the hostname of the admin API without any of the path following the hostname. Populate the information into the [Host](#) field.
 2. Populate the [Path Prefix](#) field with the rest of the path in the admin API. Append [app](#) to it with no trailing slash.
 3. Complete the [HTTP Proxy Options](#) as required by your firewall rules.
 4. Enable the SSL connection settings.

See the following screenshot for an example of RFC destination settings with the following settings:

- Connection Type: G
- Target Host: mobile-service-example.hana.ondemand.com
- Port (Service No.): 443
- Path Prefix: /cockpit/v1/org/ExampleOrg/space/ExampleSpace/app
- SSL: Active

RFC Destination ZMS_APP_ADMIN_API

Connection Test 

RFC Destination

Connection Type HTTP Connection to External Server Description

Description

Description 1

Description 2

Description 3

Administration Technical Settings Logon & Security Special Options

Target System Settings

Host Port

Path Prefix

HTTP Proxy Options

Global Configuration

Proxy Host

Proxy Service

Proxy User

Proxy PW Status

3. Open the [Administration Portal](#) using transaction [/syclo/admin](#).
4. Select the [Administration](#) tab.
5. Click [Server Management](#), then click [Create](#).
6. Create a meaningful server name.
7. Provide the [RFC Destination](#) or the [UI Host Name](#) and [Server URL](#) pointing to the MS Admin API created in [Step 2](#).
8. Select the mobile application for which you are creating a mobile services application.
See the following screenshot for an example of the middleware server management configuration with the following settings:
 - UI Host Name: <https://mobile-service-example.hana.ondemand.com>
 - Server URL: </cockpit/v1/org/ExampleOrg/space/ExampleSpace/app>

9. Save your changes.

9.1.2.3.2 Defining the Mobile Application Integration Framework OData Service

Mobile Application Integration Framework oData Service	
oData Service Mobile App	SAP_SERVICE_ASSET_MANAGER_2305
oData Service Technical Name	/MERP/SAP_SRV_ASSET_MANAGER_2305
oData Service Group Version	1

Your MAIF mobile app selection corresponds to an application that serves as an OData service to mobile devices through the definitions defined in [/syclo/configpanel](#).

Note

The MAIF mobile app must correspond to the application serving as an OData service for proper generation of mobile app settings in SAP BTP services.

9.1.2.3.3 Defining the SAP BTP services Application Settings

Mobile Services Application Settings	
MS Application ID	SAP.SAM2305
MS Application Name	SAP_SERVICE_ASSET_MANAGER_2305
MS Application Description	SAP_SERVICE_ASSET_MANAGER_2305
MS Vendor Name	SAP
MS Application Timeout	1.200.000
MDK Onboarding URI Schema	samclient

Field Name	Description	Standard or Advanced View
MS Application ID	Unique identifier for your cloud platform instance of SAP BTP services to identify a series of configurations associated with a given, defined, mobile application. The application ID must be unique per instance of mobile services admin API.	Standard
MS Application Name	Any text displayed on the SAP BTP cockpit for administration	Standard
MS Application Description	Any text displayed on the SAP BTP cockpit for administration	Standard
MS Vendor Name	Name of the vendor providing the application definitions	Standard
MS Application Timeout	Amount of time before a mobile device connected to the mobile application in SAP BTP services should wait before being considered timed out	Standard
MDK Onboarding URI Schema	Defines how the SAP BTP services app will generate a QR code for onboarding of mobile devices to the mobile application. Depending on the version of the mobile application client you are using, this value needs to correspond with the client that will launch the mobile application when the QR code is scanned. Common examples are mdkclient for the SAP Mobile Development Kit client or samclient for the SAP Service and Asset Manager application downloaded from the iOS App Store or Android Play Store.	Advanced

9.1.2.3.4 Defining the Mobile Service Offline OData Settings

If the SAP Gateway connected to the back end SAP system is running as a parallelized gateway or a gateway hub, select this option to ensure the proper generation of data is being sent to the mobile devices.

Mobile Services Offline oData settings

oDataOffline Destination	DEST_SAN2305_PPROP
oDataOffline Request Format	JSON
oDataOffline Content ID Loc	OPERATION
oDataOffline Delta Format	XML
☒ oDataOffline Refresh in Order	
oDataOffline Delta Resend	
☐ oDataOffline Prepop DB	
☒ oDataOffline Case Sensitivity	
oDataOffline Prepop Interval	1440
oDataOffline Offline Collation	UTF8BIN
☐ oDataOffline DateTime Offset	
oDataOffline Change Expiry	
☐ oDataOffline Max Length Omit	
oDataOffline Refresh Interval	1.440
☐ Parallelized Gateway	
oDataOffline DT Lifetime	
oDataOffline Cache Expiration	
oDataOffline Delta Tracking	
Application Tag	SAP_SERVICE_ASSET_MANAGER

Field Name	Description	Standard or Advanced View
Application Tag	Application tag that is appended to all attempts at synchronizing SAP mobile applications using the Mobile Application Integration Framework and the SAP back end system. Application tags are used to count licensed users in a given environment and must stay consistent. If the application tag is incorrectly generated in a production environment, the connection to SAP Cloud Reporting for reporting usage metrics could be compromised. The application could fail due to failed licensing checks. See Configuring Customer Usage Metrics [page 130] for more information.	Advanced
oDataOffline Destination	The mobile services destination which the oDataOffline service uses to sync local versions of mobile device databases that allow mobile applications to work offline. This field must match the mobile destination name as listed in Defining the Mobile Services Connection Configuration [page 125]	Advanced
oDataOffline Request Format	Format with which mobile services requests data that will be populated in the local mobile databases from the back end SAP system. JSON is the standard value for MAIF support applications.	Advanced
oDataOffline Content ID Location	The contentID type of files downloaded by the oDataOffline Service. Choose either MIME or OPERATION based on your system setup.	Advanced
oDataOffline Delta Format	Format with which mobile services requests data that is populated in the local mobile databases from the SAP back end systems during a delta sync (all subsequent syncs that occur after the mobile device has completed onboarding). Depending on the SAP Gateway version, JSON may or may not be supported. XML is always supported.	Advanced
oDataOffline Refresh in Order	Determines whether or not mobile services will respect the order of oData entities as defined by the MAIF configuration. This flag must remain ON for all MAIF-supported applications.	Advanced
oDataOffline Delta Resend	Not used by MAIF applications. For more information, see the max_delta_resends row in the Application Configuration File topic.	Advanced
oDataOffline Prepopulate DB	Not used by MAIF applications. For more information, see the prepopulate_offline_db row in the Application Configuration File topic.	Advanced

Field Name	Description	Standard or Advanced View
oDataOffline Case Sensitivity	Determines whether or not data transmitted to mobile services retains its case during data transmission. For proper functionality of MAIF-supported applications, this flag must remain ON.	Advanced
oDataOffline DateTime Offset	Not used by MAIF applications. For more information, see the json_datetimeoffset_in_utc row in the Application Configuration File topic.	Advanced
oDataOffline Change Expiry	Not used by MAIF applications. For more information, see the local_change_expiry row in the Application Configuration File topic.	Advanced
oDataOffline Max Length Omit	Not used by MAIF applications. For more information, see the allow_omitting_max_length_facet row in the Application Configuration File topic.	Advanced
oDataOffline Refresh Interval	Maximum amount of time to cache entities in the oDataOffline sync database. Value is set to 1440 by default.	Advanced
oDataOffline DT Lifetime	Lifetime of the delta tokens generated in oDataOffline. MAIF-supported applications use delta tokens managed and generated by the SAP back end system, so this field is not used.	Advanced
oDataOffline Cache Expiration	Maximum amount of time to cache the oDataOffline database	Advanced
oDataOffline Delta Tracking	Flag to determine whether or not mobile services tracks changes between cached data on mobile services and the SAP back end system. This field is not used in MAIF-supported applications.	Advanced

9.1.2.3.5 Defining the Mobile Services Connection Configuration

The following topic only goes over the interaction of how the mobile services application creator bundled with MAIF utilizes these definitions for use with supported mobile applications. For detailed information regarding mobile services connectivity definitions, see the [Defining Connectivity](#) topic in the *SAP Mobile Services Administration* guide.

Mobile Services Connection Configuration

☐ Offline Destination Only

☒ Offline & Online Destinations

SCC X.509 Virtual Host

SCC X.509 Virtual Port

SCC Standard Virtual Host

SCC Standard Virtual Port

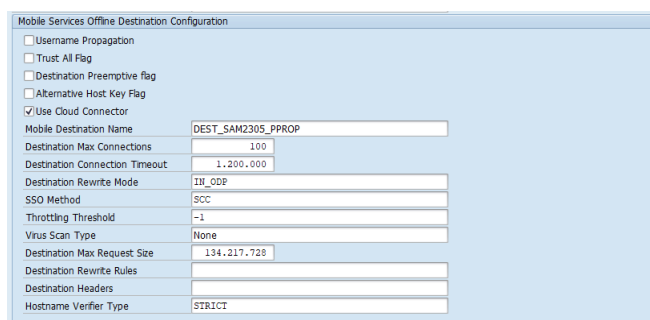
Cloud Connector Location ID

Gateway Service User

Gateway Service Password

Field Name	Description	Standard or Advanced View
SCC X.509 Virtual Host	The virtual host defined by the Cloud Connector that allows an SAP BTP resource to identify a specific SAP Gateway server, configured with principal propagation through x.509 certificate generation.	Standard
SCC X.509 Virtual Port	Port assigned to the virtual host	Standard
SCC Standard Virtual Host	No longer in use	Standard
SCC Standard Virtual Port	No longer in use	Standard
Cloud Connector Location ID	Location ID used to identify a given connection between a Cloud Connector and an SAP BTP subaccount. Can also be labeled <i>Cloud Connector ID</i>	Standard
 Note This is the location ID and not the cloud connector ID		
Gateway Service User	Technical user allowed to perform an HTTPS ping against the SAP Gateway for connectivity testing purposes.	Standard
Gateway Service Password	Password for the Gateway Service User	Standard
Offline Destination Only	Does not create the online destination in the mobile services application. For more information, see the <i>Mobile Services Offline Destination Configuration</i> section in this topic.	Advanced
Offline and Online Destinations	Creates both online and offline destinations. For more information, see the <i>Mobile Services Offline Destination Configuration</i> and the <i>Mobile Services Online Destination Configuration</i> sections in this topic.	Advanced

Mobile Services Offline Destination Configuration



Mobile applications supported by the Mobile Application Integration Framework support offline destinations by default. Offline destinations are OData services provided by MAIF for complete download and sync with

the mobile app. The services automatically handle data distribution, conflict resolution, and mobile offline application usage.

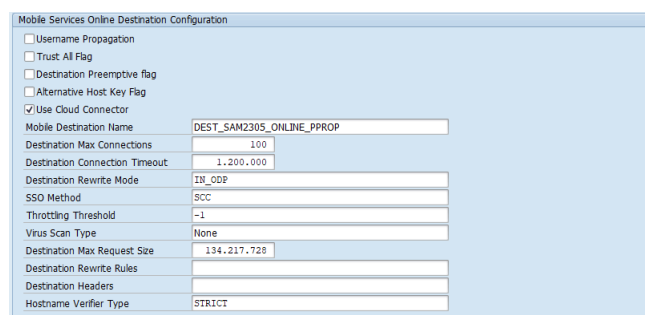
The primary operation of applications connecting to offline destinations in SAP BTP services is through the oDataOffline framework on the mobile device. Changes made to data on the local devices must be synced with the back end database on demand.

Mobile Services Offline Destination Configuration

Field Name	Description	Standard or Advanced View
Username Propagation	Enables the Username propagation flag on SAP Mobile Services Connectivity	Advanced
Trust All flag	Not used by MAIF applications	Advanced
Determination Preemptive flag	Not used by MAIF applications	Advanced
Alternative Host Key flag	Not used by MAIF applications	Advanced
Use Cloud Connector	Must be selected for on-premise back end servers	Advanced
Mobile Destination Name	Name of the mobile destination defined in the client metadata. The name in this field must match the name of the destination defined by the MDK metadata.	Advanced
Destination Max Connections	Maximum number of simultaneous users downloading data from the destination	Advanced
Destination Connection Timeout	The longest amount of time expected for each request to spend downloading from the destination	Advanced
Destination Rewrite Mode	Method used to rewrite mobile services URLs to back end service URLs. <i>IN_ODP</i> is the standard rewrite mode that is compatible with the cloud connector rewrite modes from the SCC's virtualhost definitions	Advanced
SSO Method	The single sign-on method used to identify mobile application users to the back end system. SCC is the standard cloud connector principal propagation mode.	Advanced
Throttling Threshold	Not used by MAIF applications The default of <i>-1</i> is held in this field	Advanced
Destination Max Request Size	The maximum size of a request for requests being sent to the mobile device	Advanced
Destination Rewrite Rules	If the Destination Rewrite mode is set to <i>custom</i> , the custom definitions for mobile services can be entered here	Advanced

Field Name	Description	Standard or Advanced View
Destination Header	Custom headers can be inserted here for the connection. If the SAP Gateway system being connected to the SAP BTP services instance does not have the default client set to the client hosting the data being requested, the client can be overwritten. See the following format for an example: <pre> { "name": "sap-client", "value": "001", "overwrite": true } </pre>	Advanced
Hostname Verifier Type	Not used by MAIF applications The default of <i>STRICT</i> is held in this field	Advanced

Mobile Services Online Destination Configuration



Mobile applications supported by MAIF have supported online destinations since October 2017. Online destinations are OData services provided by MAIF for on-demand download and data sync with the mobile applications. Online destinations are mandatory for a mobile application that frequently handles updating data that must be downloaded in real time and can only be accessed while the mobile device has an internet connection.

Mobile Services Offline Destination Configuration

Field Name	Description	Standard or Advanced View
Username Propagation	Enables the Username propagation flag on SAP Mobile Services Connectivity	Advanced
Trust All flag	Not used by MAIF applications	Advanced

Field Name	Description	Standard or Advanced View
Determination Preemptive flag	Not used by MAIF applications	Advanced
Alternative Host Key flag	Not used by MAIF applications	Advanced
Use Cloud Connector	Must be selected for on-premise back end servers	Advanced
Mobile Destination Name	Name of the mobile destination defined in the client metadata. The name in this field must match the name of the destination defined by the MDK metadata.	Advanced
Destination Max Connections	Maximum number of simultaneous users downloading data from the destination	Advanced
Destination Connection Timeout	The longest amount of time expected for each request to spend downloading from the destination	Advanced
Destination Rewrite Mode	Method used to rewrite mobile services URLs to back end service URLs. <i>IN_ODP</i> is the standard rewrite mode that is compatible with the cloud connector rewrite modes from the SCC's virtualhost definitions	Advanced
SSO Method	The single sign-on method used to identify mobile application users to the back end system. SCC is the standard cloud connector principal propagation mode.	Advanced
Throttling Threshold	Not used by MAIF applications The default of <i>-1</i> is held in this field	Advanced
Destination Max Request Size	The maximum size of a request for requests being sent to the mobile device	Advanced
Destination Rewrite Rules	If the Destination Rewrite mode is set to <i>custom</i> , the custom definitions for mobile services can be entered here	Advanced
Destination Header	Custom headers can be inserted here for the connection. If the SAP Gateway system being connected to the SAP BTP services instance does not have the default client set to the client hosting the data being requested, the client can be overwritten. See the following format for an example:	Advanced
Sample Code <pre>{ "name": "sap-client", "value": "001", "overwrite": true }</pre>		
Hostname Verifier Type	Not used by MAIF applications The default of <i>STRICT</i> is held in this field	Advanced

9.1.2.4 Configuring Customer Usage Metrics

All applications using MAIF require reporting of customer usage metrics to ensure customers are not exceeding their licensed user counts based on personas.

Executing this procedure in a production environment starts an automatic, periodic, transmission of usage metrics to SAP. If the procedure fails to send usage metrics to SAP for longer than a period of 14 days, while connecting to SAP Service and Asset Manager, the Mobile Application Integration Framework will prohibit any further incoming connections.

To ensure that usage metrics are successfully transmitted, use transaction code [SM37](#) to check the [Job Overview](#) for a job created running ABAP Program Name `/MFND/CORE_CLOUD_METRICS_PROG`.

If you need support, open a support message at <https://support.sap.com/incident> using the [MOB-APP-MAO](#) component.

Parent topic: [Setting Up and Deploying an App in Cloud Foundry \[page 108\]](#)

Previous: [Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application \[page 118\]](#)

9.1.2.4.1 Defining the Application

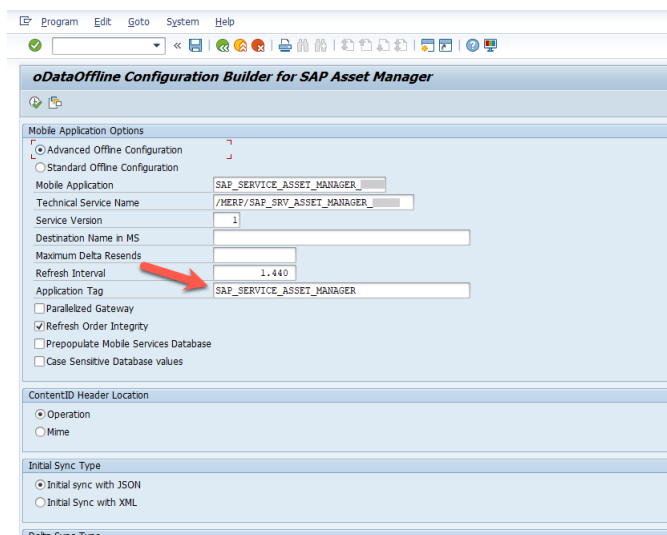
Properly defining the mobile application provides a way to integrate MAIF with SAP Cloud Reporting. Integration allows the collection of usage metrics.

Using a synchronization (sync) process, mobile devices utilize SAP BTP services as a proxy to download data from the back end system through MAIF. A delta sync process attempts to keep data integrity between the mobile device and the back end system where data changes are either uploaded or downloaded either on-demand or periodically.

The mobile device sends an [Open Sync Session](#) command that identifies the technical product name used in the mobile application starting the sync process using a value called the [Application Tag](#) or [SAP Product](#)

Technical Name. The value sent during the open sync session is determined by the [App Tag](#) defined in the oDataOffline Configuration. You can set the app tag in the following ways:

- Manually set in the .ini file using the /MERP/CORE_OFFLINE_CONFIG_PROG as shown in the following example:



- Set automatically using the process defined in [Defining the Mobile Service Offline OData Settings \[page 123\]](#)

If the application is not defined correctly in a production environment, the application will cease to operate after two weeks of failed attempts to connect.

9.1.2.4.2 Setting Up SAP Cloud Reporting Integration in MAIF

For mobile applications using MAIF, usage metrics sent to SAP Cloud Reporting require the establishment of a Unified Mobile Services API for every given application defined as a middleware server record in the [/SYCLO/ Admin](#) transaction.

Establish the middleware server record based on the landscape of the deployed MAIF-supported application as well as the firewall rules for the SAP server on which MAIF or the Mobile Add-On is running. After the middleware server record is established, schedule a periodic job to execute the ABAP report [/MFND/CORE_CLOUD_METRICS_PROG](#) on a daily basis. The report details licensed user counts, aggregate usage by functional usage equivalent type, and licensed applications to SAP Cloud Reporting.

Use one of the following methods to set up SAP Cloud Reporting integrations in MAIF:

- [Direct Connection: Integrating SAP Cloud Reporting for MAIF-Based Mobile Applications on SAP BTP services for Cloud Foundry \[page 132\]](#)
- [RFC Connection: Integrating SAP Cloud Reporting for MAIF-Based Mobile Applications on SAP BTP services for Cloud Foundry \[page 132\]](#)

Note

- For information on setting up SAP Cloud Reporting in a Neo environment, see [Configuring Customer Usage Metrics for Neo Environments](#).
- SAP Business Technology Platform, Neo environment will sunset as described in SAP Note [3351844](#). For more information about how to migrate the SAP Service and Asset Manager application, see [Migrating From Neo to Cloud Foundry Environment](#).

9.1.2.4.2.1 Direct Connection: Integrating SAP Cloud Reporting for MAIF-Based Mobile Applications on SAP BTP services for Cloud Foundry

Use the direct connection method if you're using SAP BTP services with a back end SAP system capable of connecting directly to the internet without requiring outbound proxies or other special firewall rules.

Execute the instructions found in . The App Creator program automatically generates the required connections to SAP BTP services. The App Creator program also establishes the periodic job under the user who executed the App Creator program to run the usage metrics integration with SAP Cloud Reporting.

9.1.2.4.2.2 RFC Connection: Integrating SAP Cloud Reporting for MAIF-Based Mobile Applications on SAP BTP services for Cloud Foundry

Context

If you're using SAP BTP services on a back end SAP system that has requirements to invoke communications with the internet outside of a corporate firewall, use RFC connectivity for usage metrics integration to SAP Cloud Reporting in MAIF. You'll need to manually create and define the RFC destination.

Note

If the application is already created, update the middleware server record using the following procedure.

If the customer requires an RFC connection for outbounds rather than the direct HTTP connections for cloud metrics, use the following procedure to utilize the RFC destinations:

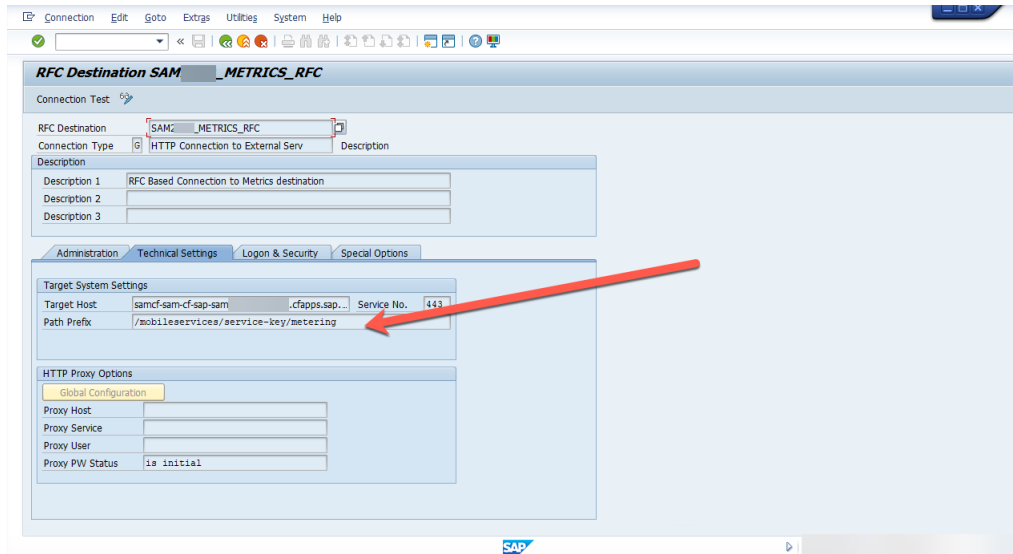
Procedure

1. Create a new [SM59](#) connection (ex: SAM<version>_METRICS_RFC).
2. Add the target host of the server API from the SAP BTP services listing.

The screenshot shows the SAP Service and Asset Manager configuration page for the application `SAP_SERVICE_ASSET_MANAGER_2210`. The page is divided into several sections: **Onboarding** (with In-app Scanning Code and Apple and Android Launch App Code with URI Scheme), **Default Configuration** (with iOS and Android links), and **Configuration** (with Domain of Application Route). The **APIs** tab is selected, showing a table of API configurations. A red arrow points to the **URL** column of the table.

API	URL
Server	<code>https://samcf-sam-cf-sap-sam- cfapps.sap.hana.ondemand.com</code>
Destination	<code>https://samcf-sam-cf-sap-sam- cfapps.sap.hana.ondemand.com/DEST_SAM2210_PPROP</code>
Destination	<code>https://samcf-sam-cf-sap-sam- cfapps.sap.hana.ondemand.com/DEST_SAM2210_ONLINE_PPROP</code>
Registration	<code>https://samcf-sam-cf-sap-sam- cfapps.sap.hana.ondemand.com/odata/applications/v4/SAP.SAM2210</code>

3. Add `/mobileservices/service-key/metering` to the *Path Prefix* field. Add `443` to the *Service No* field.



4. Set the SSL to *Active* in the *Logon & Security* tab. Save the RFC destination.
5. Navigate to */syco/admin*. Then navigate to *Administration > Server Management*.
6. Search for the mobile application you're configuring. Then find the unified server listing. Keep the *UI Hostname* as-is. Add */mobileservices/service-key/metering* to the *Server URL (FQDN)*.

⚠ Restriction

Do not fill in the *Tenant ID* field.

Middleware Server Management

Search Middleware Servers

Basic Search Parameters

* Mobile Application: **SAP Service and Asset Manager**

Server Name: Server Port:

Serial No:

Search Result

View: [Standard View] | Print Version | Export

Server Name	Port	Serial No.	Mobile App	Lock Flag	Disable Outb. Trigger	C
SCP_MOBILE_SERVICES		SCP	SAP_SERVICE_ASSET_MANAGER_2210			2
ASPM_CLOUD	7003	SCP	SAP_SERVICE_ASSET_MANAGER_2210			0
SAM_CF_PUSH	7003	SCP	SAP_SERVICE_ASSET_MANAGER_2210			1
SAP_SERVICE_ASSET_MANAGER_2210_MS_UNIFIED_SERVER	443	SCP	SAP_SERVICE_ASSET_MANAGER_2210			1
SAM_METRICS_RFC_SERVICE	7003	SCP	SAP_SERVICE_ASSET_MANAGER_2210			2

Middleware Server Detail (Display Mode)

Change

Basic Info | Additional Properties

Mobile Application: **SAP Service and Asset Manager** * Server GUID:

* Server Name: **SAM_METRICS_RFC_SERVICE** * Port:

* Middleware Svr SerNo: **SCP**

Server URL (FQDN): **/mobileservices/service-key/metering**

Target Host:

Tenant ID:

System Component:

RFC Destination: **SAM2210_METRICS_RFC (G) : RFC Based Connection to Metrics destination**

UI Host Name: **https://samcf-sam-cf-sap-sam.cfapps.sap.hana.ondemand.com**

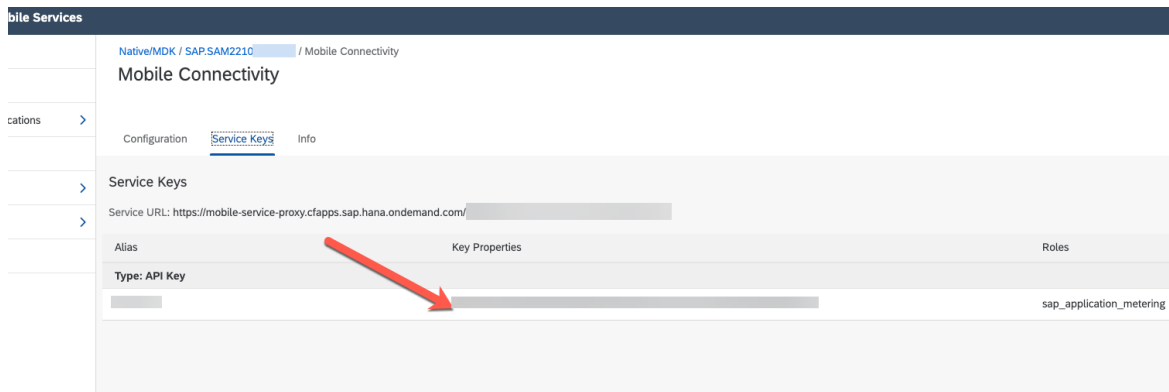
Local Outbound Trigger Port: **00000**

Outbound Trigger URL Type: **Use FQDN when available**

Lock Flag: ☐

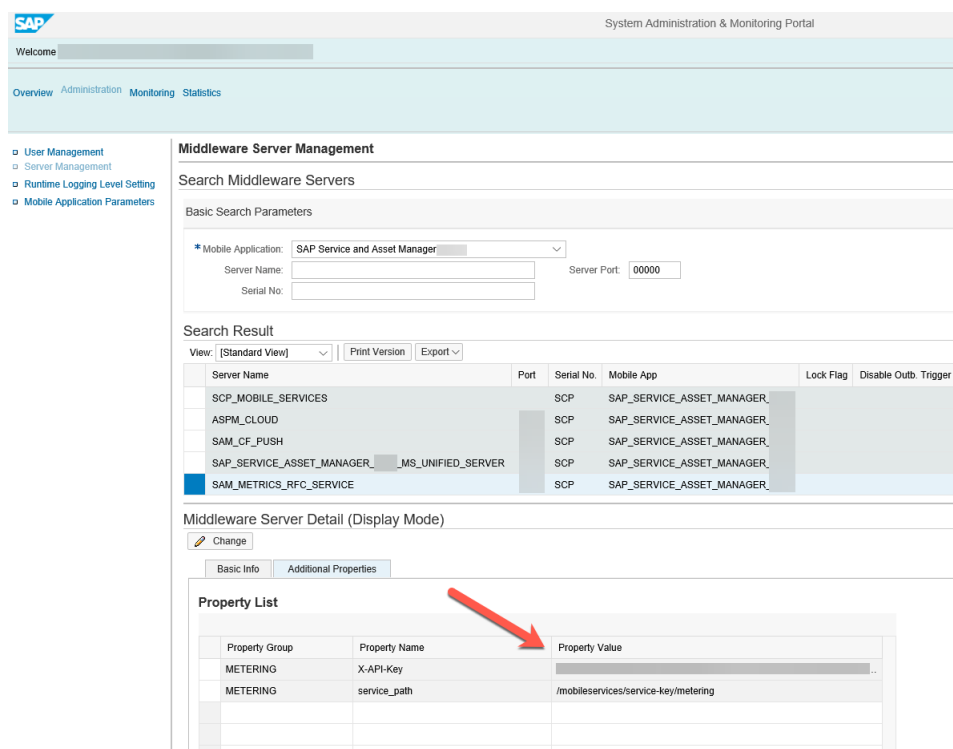
Disabled for Outbound Trigger: ☐

7. Find and copy the API key located in *Connectivity > Service Keys* of SAP BTP services.

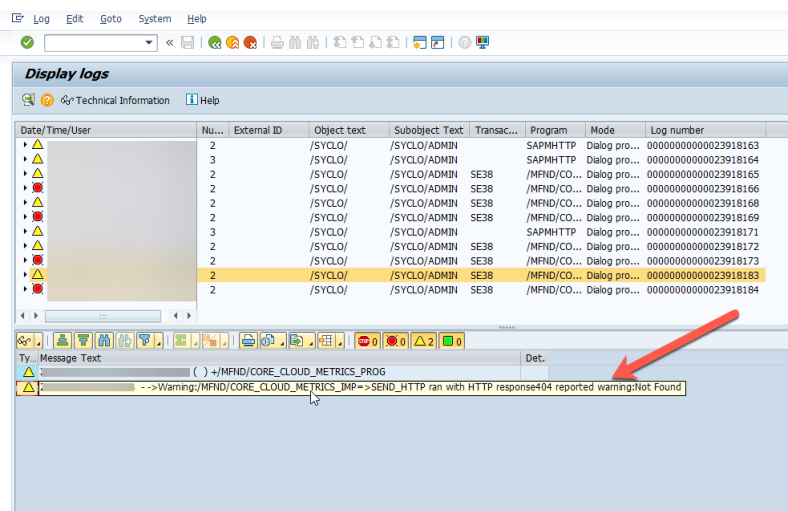


8. Return to the **Middleware Server Management** **Additional Properties** tab in the Admin Portal and add the following properties:

- Add the API key with the following properties:
 - Property Group: METERING
 - Property Name: X-API-Key
- Add `/mobileservices/service-key-metering` with the following properties:
 - Property Group: METERING
 - Property Name: service_path



9. In the SAP GUI, use transaction **SE38** to execute the `/MFND/CORE_CLOUD_METRICS_PROG` report with the correct mobile application. Check **SLG1** to ensure there is no HTTP error logged. See the following screenshot for an example of the error.



Next Steps

Continue using the App Creator program section found in [Defining the SAP BTP services Connection Information \[page 119\]](#), section *Option 2: Establishing RFC Connection Information for the SAP BTP services App Creator*.

9.2 Cloud Connector

The SAP on-premise landscape communicates with the SAP Business Technology Platform via the Cloud Connector.

Find more information on the Cloud Connector in the [SAP Business Technology Platform Connectivity](#) documentation.

During the installation of the Cloud Connector, take the following steps:

1. Ensure that the system certificate is trusted by the back-end SAP Gateway. You can add a certificate via transaction **STRUST**.
2. For principal propagation, ensure that the local CA certificate is set up and the back end accepts the x.509 principal propagation certificate sent from the Cloud Connector. The back-end SAP Gateway needs to allow authentication via principal propagation in order to properly determine data distribution for a given mobile application user. Therefore, define the subject pattern that the x.509 certificates are sent with from the Cloud Connector in the SAP Gateway system, either explicitly through transaction **EXTID_DN** or via a certificate rule through transaction **CERTRULE**.
3. In addition, the subject and issuers of all certificates need to be trusted in the ICM system.
 1. Add the parameter `<icm/HTTPS/trust_client_with_issuer = <Subject of CA Certificate on Cloud Connector>` and `<icm/HTTPS/trust_client_with_subject = <subject pattern of the x.509 certificate from the cloud connector>` into the [System Profile Parameters](#) using transaction **RZ10**.

2. Restart the ICM framework using transaction SMICM under the option ► [Administration](#) ► [Hard Shutdown](#) ► [Global](#) .

Once the on-premise connection to the Cloud Connector is established and configured, establish the connection to the SAP Business Technology Platform account.

1. Ensure that the Cloud Connector has its trust configuration and proxy configuration set properly to communicate with the SAP Business Technology Platform region that you would like to connect to.
2. Create a connection to a valid subaccount with the previous checklist in this topic accomplished. Use the subaccount ID and a user account that has been added to that subaccount with the role [Cloud Connector Admin](#) or [Administrator](#).

After connecting the Cloud Connector to both the SAP Business Technology Platform subaccount and the SAP on-premise Gateway system, take the following steps:

1. Add the mapping from the virtual to the internal system of an HTTPS connection to the on-premise Gateway. Ensure that all resources are available for the URL path and all subpaths for `/sap/opu/odata`.
2. Ensure that the trust configuration accepts all [hanamobileprod](#) based trusts in the [Principal Propagation](#) tab.

Note

When using the Cloud Connector with SAP BTP services on a Neo subaccount, configure [hanamobileprod:mobilejava](#) as *Trusted* in the following location: ► [Sub-account configuration](#) ► [Cloud-to-on-Premise section](#) ► [Principal Propagation tab](#) .

See [2660862](#) : SAP Business Technology Platform Mobile Services Setup Info for SAP Service and Asset Manager with SAP ERP System for detailed information.

9.3 SAP Business Application Studio

If the extension or installation of additional components onto SAP Service and Asset Manager is required, then the SAP Business Application Studio is a required deployment.

Find more information at the developer guide for the [SAP Business Application](#).

To deploy an application from the SAP Business Application Studio to the SAP BTP services instance, refer to the [Deploying Applications](#) guide.

10 SAP Service and Asset Manager Application Environment

You can find more information regarding the installation of SAP Service and Asset Manager in the [SAP Service and Asset Manager Installation Guide](#).

You can find more information regarding the configuration of SAP Service and Asset Manager in the [SAP Service and Asset Manager Configuration Guide](#).

11 Troubleshooting

11.1 Using Logs in SAP Service and Asset Manager

Error logs provide detailed context information about errors that have occurred at runtime.

Use the following logs and traces to help diagnose issues with your SAP Service and Asset Manager installation and performance after installation:

- SAP OData service traces
 - IWFND trace
 - IWBEP trace
- Cloud Connector logs
- SAP Business Technology Platform Mobile Services troubleshooting
 - SAP Business Technology Platform Mobile Services network trace
 - SAP Business Technology Platform Mobile Services log analytics
 - SAP Business Technology Platform Mobile Services client log upload
- Mobile Development Kit log uploads

11.1.1 SAP OData Service Traces

11.1.1.1 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.

SAP Gateway: Error Log

Re-Select

Overview

Line	Entry	Date	Time	User	T100 E	T100	Err	ICF N	HTT	B	Error Text	Comp	Package	Names	Service Name
5	1	11.06.2018	10:44:42	ME	/IWBE...		2	odata	400	✓	No mobile application is assigned to odata service /MERP/SAP_ASSET...	OPU...	/IWFND...	/MERP/	SAP_ASSET_MANAGER_20
4	2		05:25:36	HU	/IWBE...		1	odata		✓	Business error: Type =E Id =IM No =002 Message =Functional locatio...	OPU...	/IWFND...	/MERP/	SAP_ASSET_MANAGER_20
3	1			HU	/IWFN...		1	odata	202	✓	Rejected because of error during changeset processing	OPU...	/IWFND...	/MERP/	SAP_ASSET_MANAGER_20
2	2		04:14:50	HU	/IWBE...		1	odata		✓	Business error: Type =E Id =IM No =002 Message =Functional locatio...	OPU...	/IWFND...	/MERP/	SAP_ASSET_MANAGER_20
1	1			HU	/IWFN...		1	odata	202	✓	Rejected because of error during changeset processing	OPU...	/IWFND...	/MERP/	SAP_ASSET_MANAGER_20

XML Format Call Stack Application Log Request Data Response Data Backend Monitor Replay Configuration

Error Context

Exp. Name	Value
..ERROR_CONTEXT	
..ERROR_INFO	No mobile application is assigned to odata service /MERP/SAP_ASSET_MANAGER_20 version 0001.
..ERROR_RESOLUTION	
..SAP_NOTE	See SAP Note 1797736 for error analysis
..LINK_TO_SAP_NOTE	https://service.sap.com/sap/support/notes/1797736
..IWFND/CX_MGW_BUSI_EXCEPTION	
..REMOTE_MESSAGE	
..REMOTE_SYSTEM	
..REMOTE_MESSAGE_TYPE	
..ENTITYSET_NAME	
..MESSAGE	
..OPERATION	
..SERVICE_INFO	
..NAMESPACE	/MERP/
..SERVICE_NAME	SAP_ASSET_MANAGER_20
..VERSION	0001
..SYSTEM_ALIAS	SVB_800
..DESTINATION	NONE
..SYSTEM_INFO	
..REQUEST_URI	/sap/opu/odata/MERP/SAP_ASSET_MANAGER_20/MobileClientSynchronizationSessions?\$format=json&stop=5
..REMOTE_ADDRESS	10.97.66.248
..APPLICATION_SERVER	ldcivb_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](#).

11.1.1.2 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.

Status Service Call Info	Method	Proc. Time	Appl. Time	Non-GW	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	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	108	56	0	360	11.232	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	132	73	0	1.369	3.436	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	110	64	0	1.035	2.577	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	147	70	0	1.044	19.415	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/MobileStatuses?deltatoken='6CAE8B77396E1E...	GET	106	72	0	0	644	xml	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	113	63	0	702	1.723	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	170	108	1	1.353	3.356	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	125	71	0	717	1.798	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	132	80	0	703	1.728	mixed	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/Geometries?deltatoken='6CAE8B77396E1E...	GET	88	54	0	0	624	xml	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/Documents?deltatoken='6CAE8B77396E1E...	GET	88	52	0	0	619	xml	05.06.2018	21:54:
/MERP/SAP_ASSET_MANAGER_20/Documents?deltatoken='6CAE8B77396E1E...	GET	0	0	0	0	0		05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	150	86	0	1.709	4.325	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	519	416	0	4.053	10.368	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	249	165	0	3.077	7.921	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	178	77	0	706	84.712	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	1.272	836	0	708	2.722.215	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	2.166	1.974	0	5.815	32.054	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	1.032	756	0	4.463	81.225	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$batch	POST	696	461	0	9.651	103.371	mixed	05.06.2018	21:44:
/MERP/SAP_ASSET_MANAGER_20/\$metadata?sap-language=en	GET	318	2	0	0	559.537	xml	05.06.2018	21:44:

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.

Date	Time	User	Call Type	Method	Service Call Info	Transaction ID
05.06.2018	21:54:52		Request	GET	/MERP/SAP_ASSET_MANAGER_20/SAPUsers?deltatoken='6CAE8B77396E1E...	4DD6EF3A032E0540E00...
05.06.2018	21:54:52		Response		/MERP/SAP_ASSET_MANAGER_20/SAPUsers?deltatoken='6CAE8B77396E1E...	4DD6EF3A032E0540E00...

```

<?xml version="1.0"?>
- <feed xml:base="https://.../sap/opu/odata/MERP/SAP_ASSET_MANAGER_20/" xmlns:d="http://schemas.microsoft.com/ado/2007/08/dataservices"
  xmlns:m="http://schemas.microsoft.com/ado/2007/08/dataservices/metadata" xmlns="http://www.w3.org/2005/Atom">
  <id>https://.../sap/opu/odata/MERP/SAP_ASSET_MANAGER_20/SAPUsers</id>
  <title type="text">SAPUsers</title>
  <updated>2018-06-05T19:54:52Z</updated>
  <author>
    <name/>
  </author>
  <link title="SAPUsers" rel="self" href="SAPUsers"/>
  <link rel="delta" href="SAPUsers?deltatoken='..._20180605215452%20"/>
</feed>

```

Note

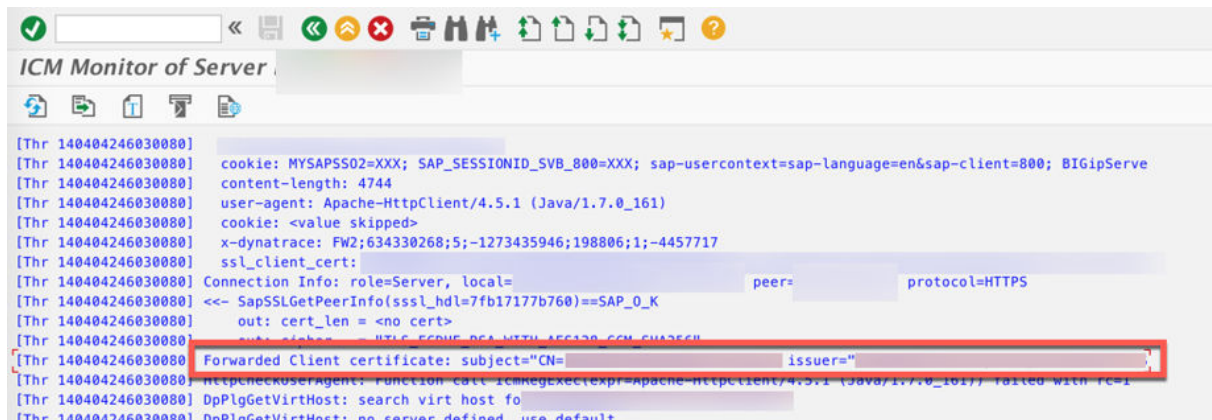
For information about how to configure and activate the **Payload Trace** tool, refer to [Tracing Tools: Configuration](#) in the SAP Gateway documentation.

11.1.1.3 Internet Communications Trace

If the internet connection is not handled properly, you can use the Internet Communications Trace that can reveal issues with principal propagation.

- Use the transaction **SMICM** to reveal client certificates and information sent alongside HTTP requests.
- You can use the incoming forwarded client certificate to determine if certificate-mapping rules are properly established.

- Trace levels are set through an administration menu.
- You can also restart the *ICM* using *SMICM*.



11.1.1.4 SAP Back End Performance Tracing Tools

The SAP back end performance tracing tools display a trace log of processes that ran as well as detailed performance information regarding those processes.

① Note

For more information, refer to [Configuration Settings for the Error Log](#).

Configuration Performance Trace Payload Trace											
Request URI Today <-> All Traces											
Performance Trace: Client 800 Use											
Stat	Service Call Info	Method	Proc. Time	Appl. Time	Non-GW	Req. Size	Resp. Size	Date	Time	Expiry Dat	
	/MISU/SAP_ASSET_MANAGER_20/WorkOrderTransfers	GET	39	32	0	0	0	10.08.2018	00:02:50	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/MeterReadingReasons?delta	GET	66	59	0	0	0	10.08.2018	00:02:50	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/Divisions?delta&token=FA16	GET	74	61	1	0	0	10.08.2018	00:02:49	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	74	62	0	0	0	10.08.2018	00:02:49	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	245	205	0	0	0	10.08.2018	00:02:48	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	90	81	0	0	0	10.08.2018	00:02:48	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	185	151	0	0	0	10.08.2018	00:02:47	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/MobileStatuses?delta&token	GET	73	66	0	0	0	10.08.2018	00:02:46	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	84	67	0	0	0	10.08.2018	00:02:46	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	144	115	0	0	0	10.08.2018	00:02:45	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	102	86	0	0	0	10.08.2018	00:02:45	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	160	143	0	0	0	10.08.2018	00:02:44	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/Geometries?delta&token=F	GET	368	359	0	0	0	10.08.2018	00:02:43	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/Documents?delta&token=F	GET	238	229	0	0	0	10.08.2018	00:02:43	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	165	132	0	0	0	10.08.2018	00:02:42	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	103	89	0	0	0	10.08.2018	00:02:42	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/Premises?delta&token=FA1	GET	68	60	0	0	0	10.08.2018	00:02:41	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	162	131	0	0	0	10.08.2018	00:02:41	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/Installations?delta&token=F	GET	89	81	0	0	0	10.08.2018	00:02:40	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	166	137	0	0	0	10.08.2018	00:02:40	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	103	89	0	0	0	10.08.2018	00:02:39	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/ActivityReasons?delta&token	GET	56	48	0	0	0	10.08.2018	00:02:39	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	307	238	0	0	0	10.08.2018	00:02:38	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	536	472	0	0	0	10.08.2018	00:02:37	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/OrderISILinks?delta&token	GET	66	60	0	0	0	10.08.2018	00:02:36	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	76	63	0	0	0	10.08.2018	00:02:36	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	82	66	0	0	0	10.08.2018	00:02:35	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	299	203	0	0	0	10.08.2018	00:02:35	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	365	290	0	0	0	10.08.2018	00:02:34	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/\$batch	POST	785	592	0	0	0	10.08.2018	00:02:32	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20 - GET_META_DATA		5	3	0	0	0	10.08.2018	00:02:31	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20/SystemStatuses	POST	83	31	0	0	0	10.08.2018	00:02:29	24.08.20:	
	/MISU/SAP_ASSET_MANAGER_20 - GET_META_DATA		9	3	0	0	0	10.08.2018	00:02:28	24.08.20:	

SAP Backend Performance Trace						
Error Log Source Code Request URI Payload Trace						
Client 800 Us			Status OK			
Line No	Subcalls	Level Class	Method	Duration (ms)	Net Time (ms)	
1	1	1 /IWBEP/CL_MGW_LOCAL_HANDLER	PROCESS_BATCH	89	2	
2	2	2 /IWBEP/CL_MGW_LOCAL_HANDLER	GET_ENTITY_SET	87	2	
3		3 /IWBEP/CL_MGW_DPC_FACTORY	/MFND/CL_CORE_ODATA_V2_DPC			
4		3 /MFND/CL_CORE_ODATA_V2_DPC	BATCH_BEGIN			
5	1	3 /IWBEP/CL_MGW_MED_PROVIDER	GET_SERVICE_METADATA	6	4	
6		4 /IWBEP/CL_MGW_MED_PROVIDER	GET_LAST_MODIFIED	2	2	
7	1	3 /MFND/CL_CORE_ODATA_V2_DPC	GET_ENTITYSET_DELTA			
8		4 /IWBEP/CL_MGW_MED_PROVIDER	GET_SERVICE_METADATA			
9	1	3 /MFND/CL_CORE_ODATA_V2_DPC	BATCH_END	79		
10	1	4 /MFND/CL_CORE_ODATA2_PROXY_MGR	PROCESS_REQUEST	79	30	
11	2	5 /MERP/CL_HR_EMPLOYEE_OD	EXECUTE_OMDO	49	20	
12	3	6 /MERP/CL_HR_EMPLOYEE_OD	READ	27	2	
13		7 /MERP/CL_HR_EMPLOYEE_OD	READ_STD_READ_FLOW_INIT_SYNC			
14	5	7 /MERP/CL_HR_EMPLOYEE_OD	RUN_STD_READ_FLOW_DELTA_SYNC	25	2	
15	1	8 /MERP/CL_HR_EMPLOYEE_OD	GET_CACHED_DISTR_KEYLIST	6		
16		9 /MFND/CL_CORE_CLIENT_STATE_MGR	GET_USER_CLIENT_STATES	6	6	
17	1	8 /MERP/CL_HR_EMPLOYEE_OD	INVOKE_DATA_DISTRIB_CALC	17		
18	1	9 /MERP/CL_HR_EMPLOYEE_OD	GET_OBJKEYS_BY_DISTRIB_RULES	17	17	
19		10 /MERP/CL_HR_EMPLOYEE_OD	RUN_AUTH_CHECK_DISTRIB_KEYLIST			
20		8 /MERP/CL_HR_EMPLOYEE_OD	GET_OBJKEYS_FOR_DELTA_LOAD			
21		8 /MERP/CL_HR_EMPLOYEE_OD	LOAD_ENTITY_DETAILS			
22		8 /MERP/CL_HR_EMPLOYEE_OD	DETERMINE_DEPENDENT_OBJECTS			
23		7 /MERP/CL_HR_EMPLOYEE_OD	POST_READ_PROCESSING			
24		6 /MERP/CL_HR_EMPLOYEE_OD	UPDATE_BO_CLIENT_STATE_CACHE	2	2	

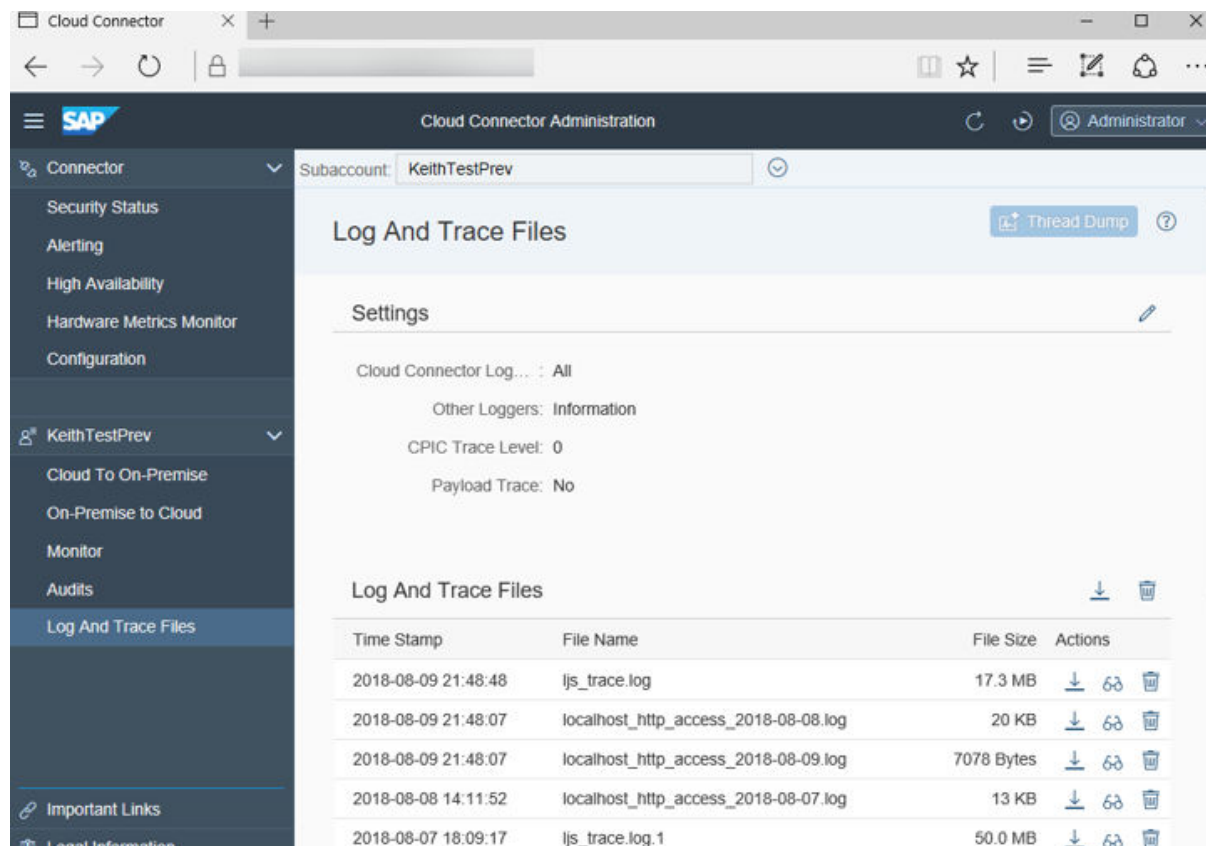
11.1.2 Cloud Connector Log and Trace Files

Cloud Connector logs show all traffic that passes through your Cloud Connector.

Note

For detailed information about how to log and trace files for SAP Cloud Connector, refer to [SAP Note 0002452568](#).

You can set your Cloud Connector settings with or without payload information:



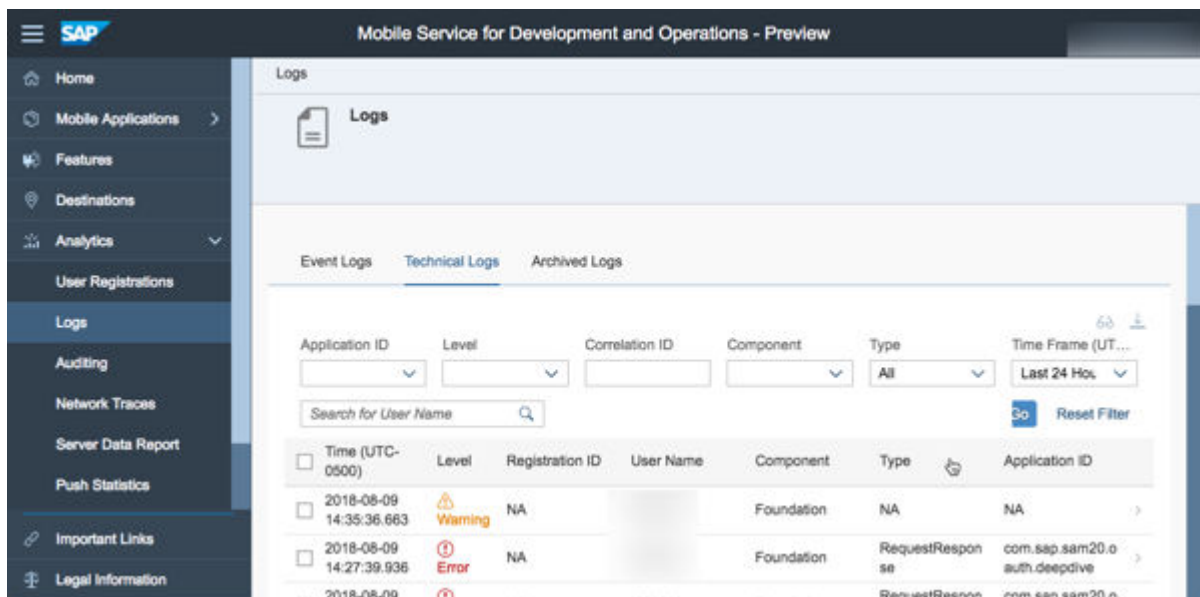
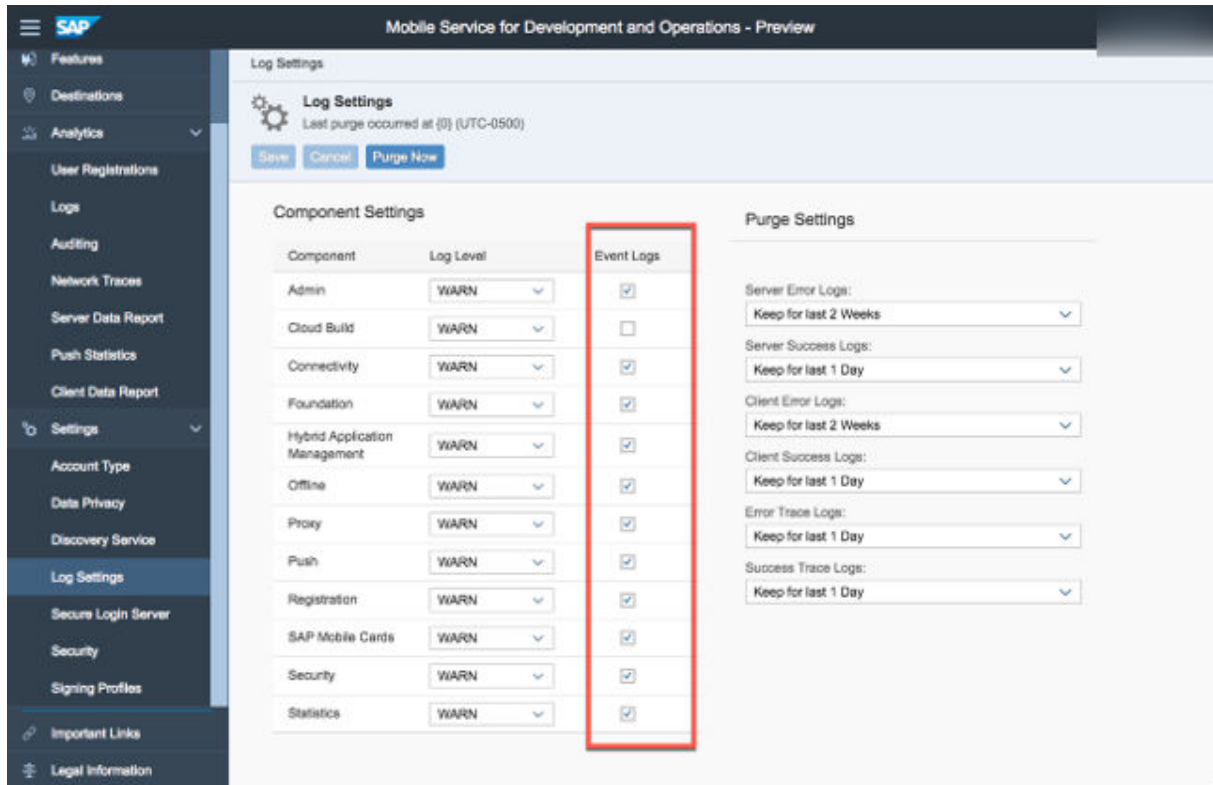
11.1.3 SAP Cloud Platform mobile services Logs and Traces

11.1.3.1 SAP Business Technology Platform Mobile Services Logs

SAP Business Technology Platform Mobile Services technical logs contain grouped logs by correlation ID for easier readability of log data.

The SAP Business Technology Platform Mobile Services aren't enabled by default. Enable the logs using [Log Settings](#).

You can set the individual log levels for each component of SAP Business Technology Platform Mobile Services through the log settings. You can also set the consistency of log purging through the settings.



Mobile Service for Development and Operations - Preview

Log / Technical Log 0c5637f4-29cf-4176-8635-8e756f87b873

Technical Log 0c5637f4-29cf-4176-8635-8e756f87b873

Application ID:
com.sap.sam20.oauth.deepdive

Technical Log Details

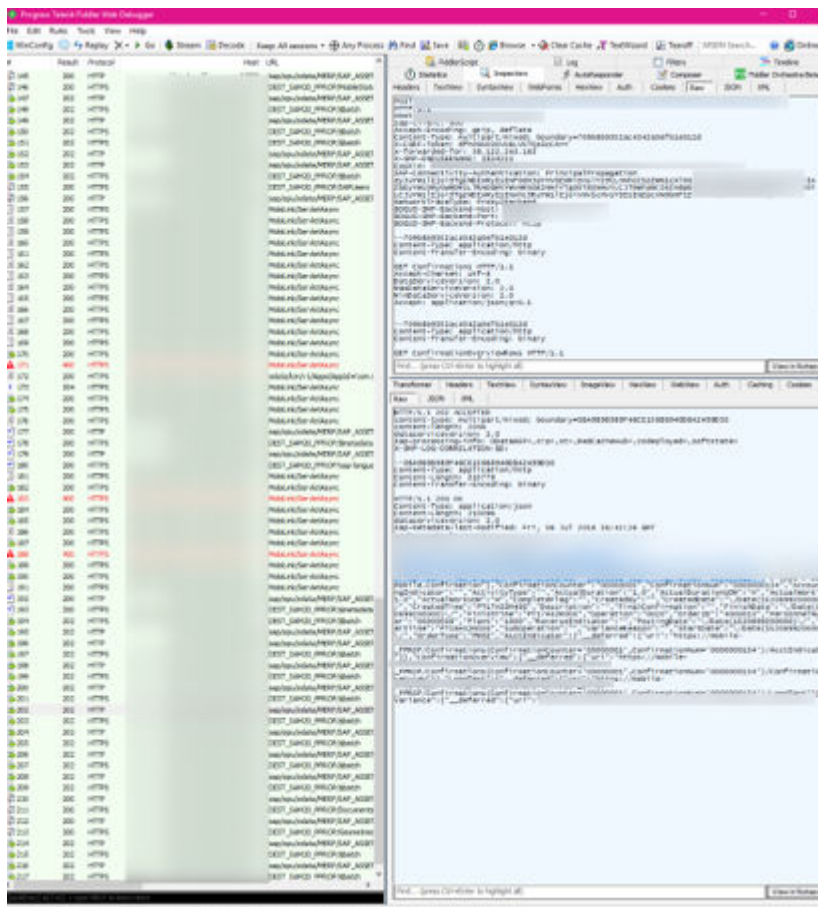
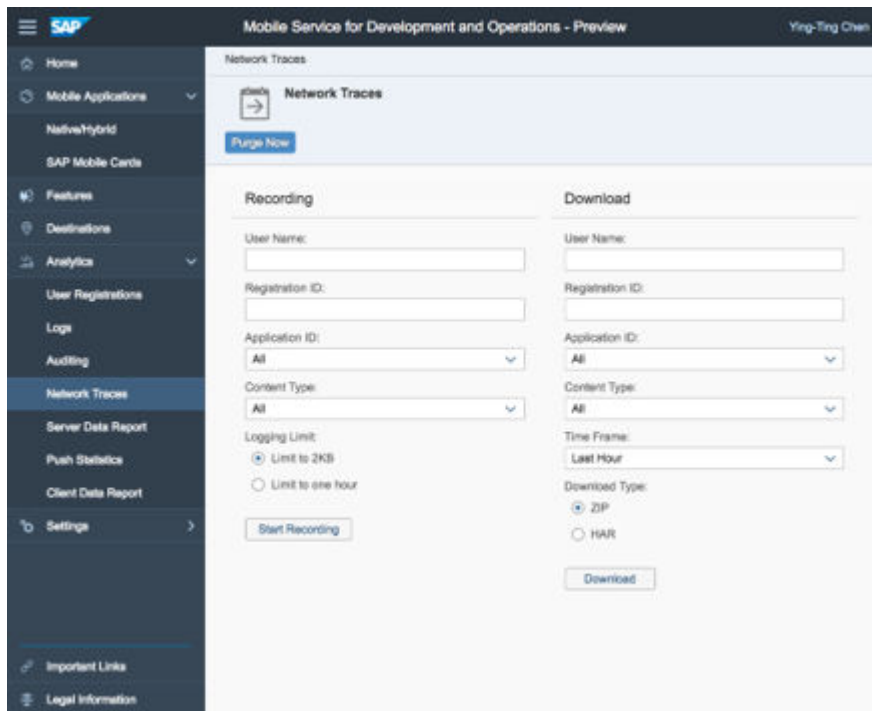
Time (UTC-0500)	Level	Registration ID	Component	Message
2018-08-09 14:28:42.830	Error	NA	Foundation	Feature Support-cloud-destination-basic-ssso does not exist in feature store. Return false
2018-08-09 14:28:42.803	Information	NA	Foundation	Called Application is not of the required type web: com.sap.sam20.oauth.deepdive
2018-08-09 14:28:42.286	Error	NA	Foundation	Feature Support-cloud-destination-basic-ssso does not exist in feature store. Return false

11.1.3.2 SAP Business Technology Platform Mobile Services Network Traces

SAP Business Technology Platform Mobile Services network traces trace calls that route through mobile services.

Download network trace files in either ZIP or HAR format. Note that SAP Business Technology Platform Mobile Services are best read in HAR format by programs like Fiddler or Charles.

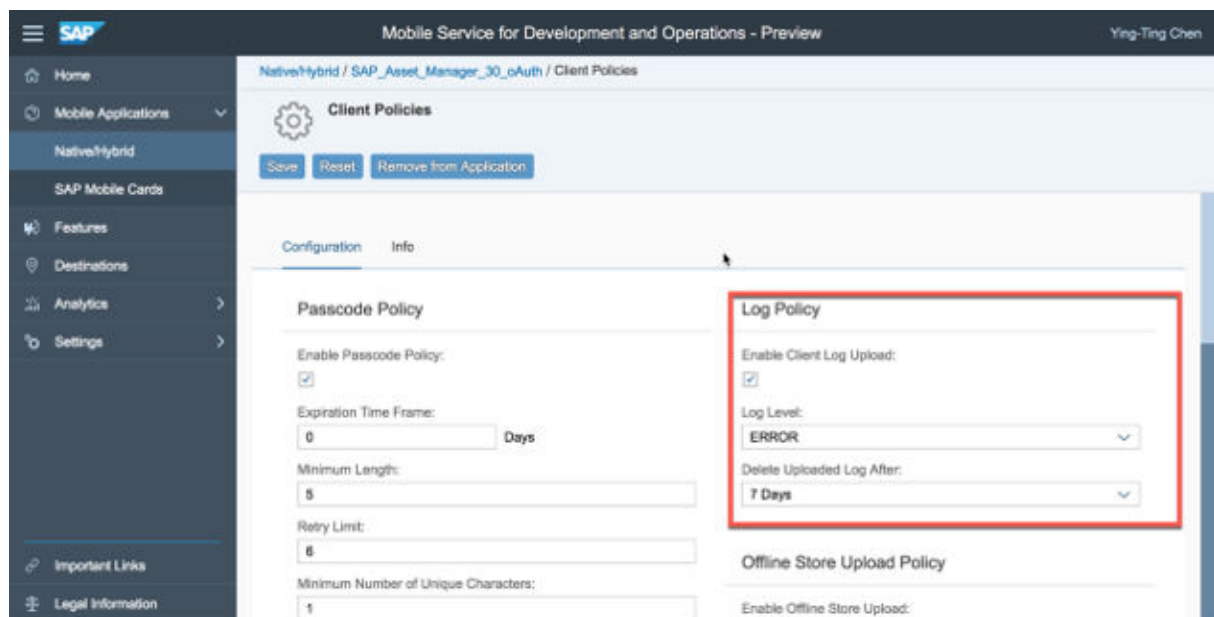
You can also set the consistency of log purging on the [Network Traces](#) screen.



11.1.4 Mobile Client and Device Logs

Use the built-in logger of the Mobile Development Kit client so that it turns on when it connects to the SAP Business Technology Platform Mobile Services application based upon the log policy set on the [Client Policies](#) screen.

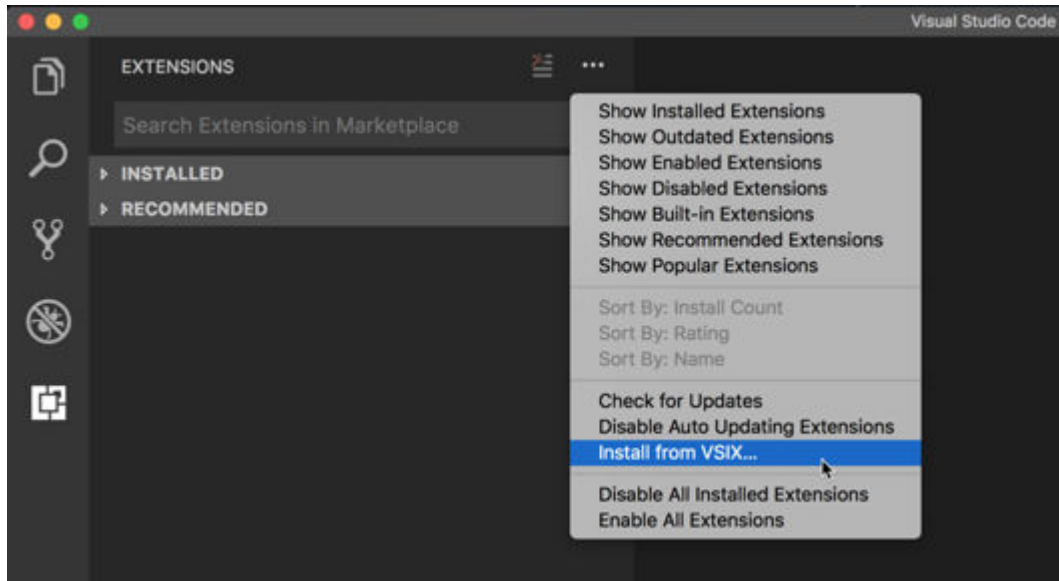
You can set the log level from the [Client Policies](#) screen in the SAP Business Technology Platform Mobile Services. Log levels are brought into the logging page through the [Analytics](#) section of SAP Business Technology Platform Mobile Services.



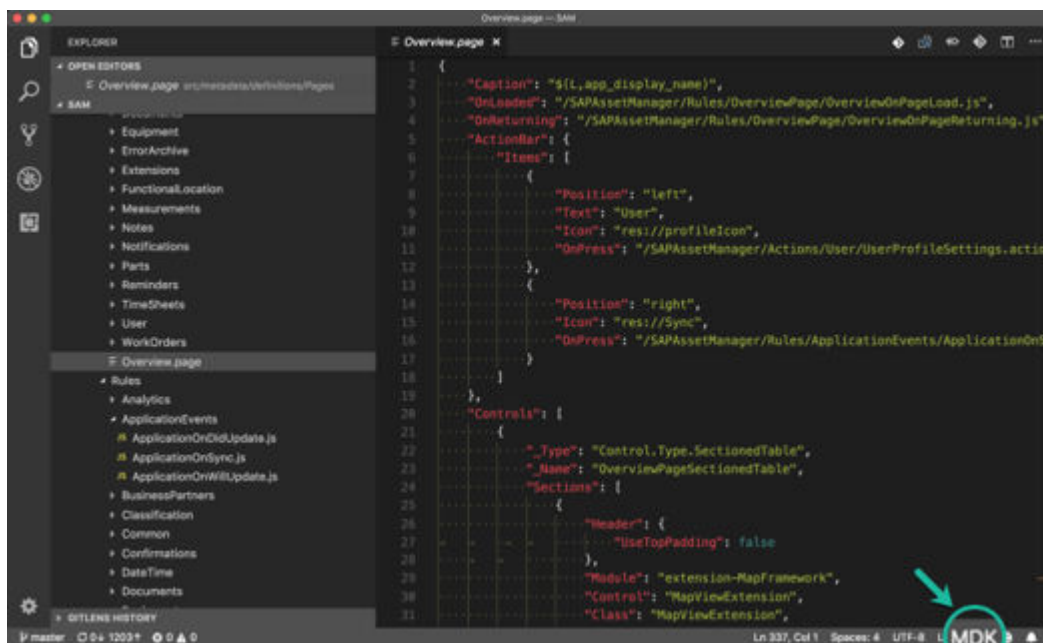
11.2 Debugging the Mobile Development Kit Using VS Code

Procedure

1. Install the Mobile Development Kit VS Code extension via the menu item of [VS Code Extensions Viewer](#) [Install from VSIX](#).

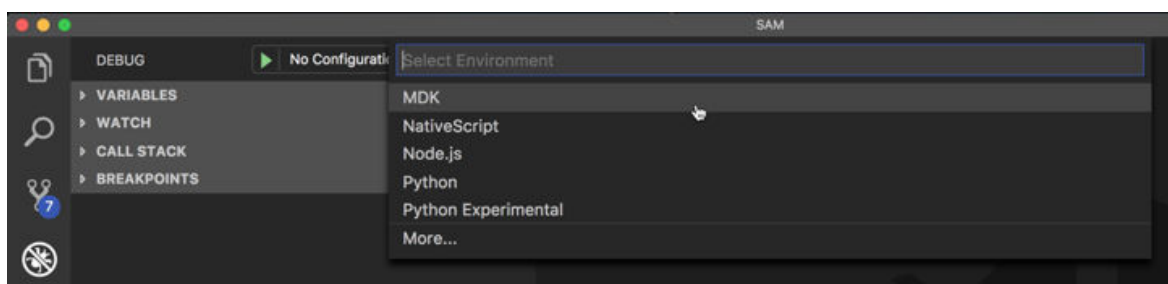


2. Reload VS Code to enable the Mobile Development Kit extension.

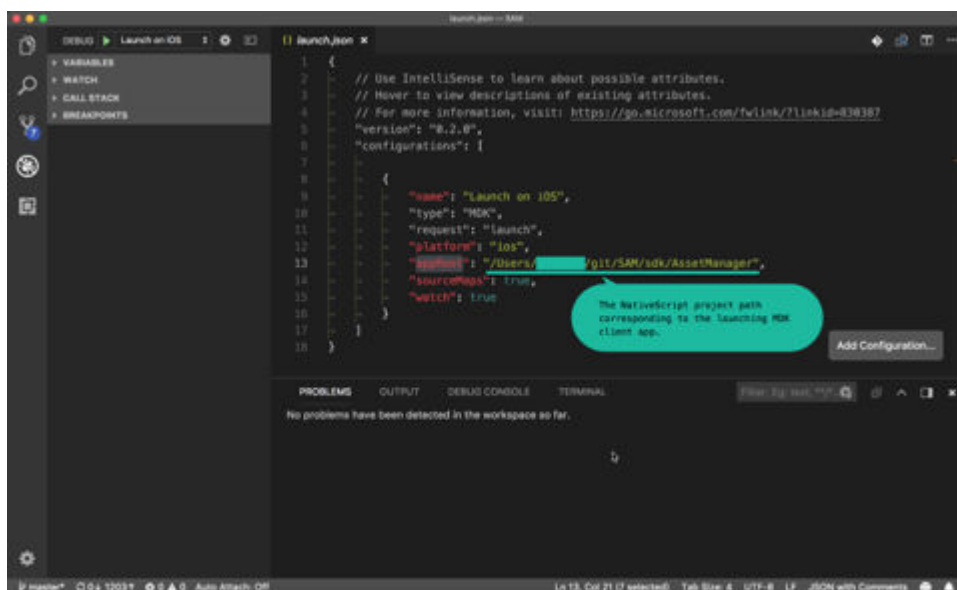


A new language mode, **MDK**, is attached to any opened Mobile Development Kit metadata file.

3. Add a new launch configuration called **MDK** for the first time launch in **Debug** view.



4. Change the value for `appRoot`.



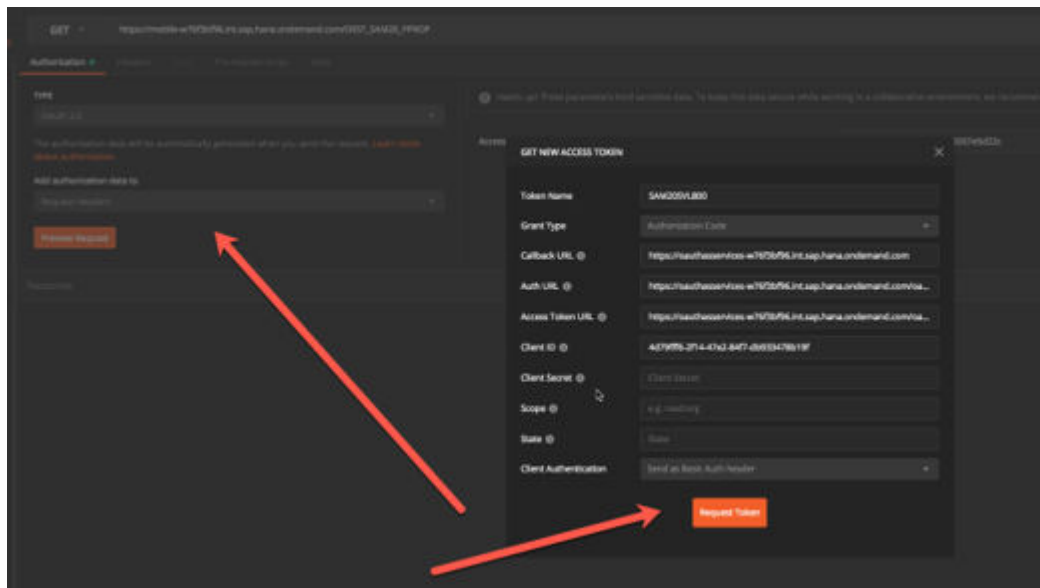
5. Click the menu item **Debug** **Start Without Debugging**.
6. Launch on iOS or attach on iOS.

11.3 Debugging the OData Model

11.3.1 Accessing OData Services Through Postman

Use Postman to access the following OData services:

- OData URIs, including
 - EntitySets (compatible headers)
 - Metadata calls
- Authenticating to OData services: basic vs oAuth



Key	Value
Authorization	Bearer
☒ Accept	application/json
☒ x-smp-applid	com.sap.sam20.oauth
New key	Value

Postman Limitations

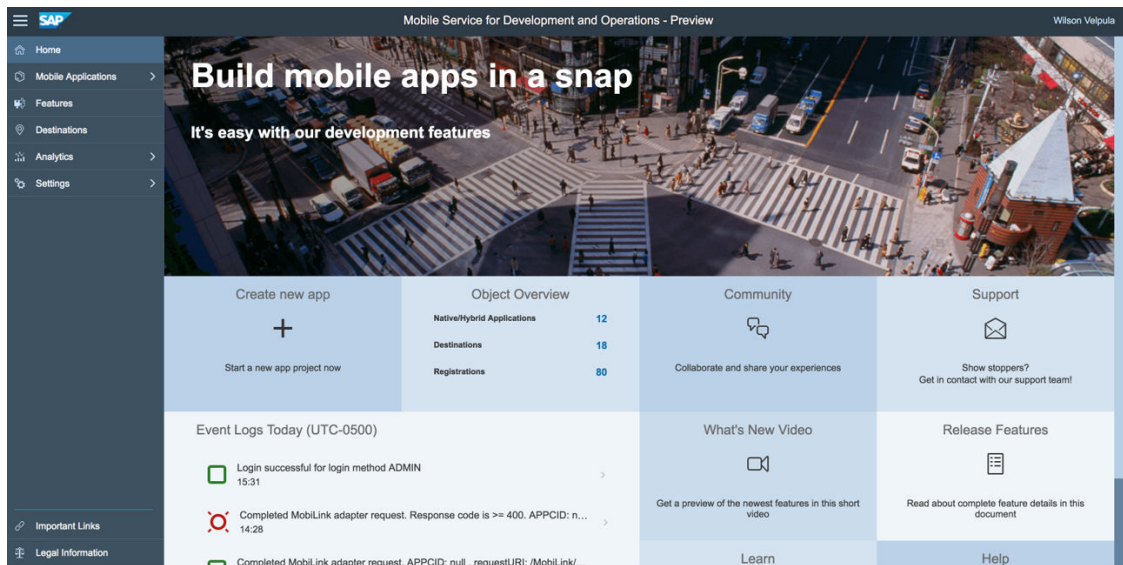
- Doesn't support offline features, including navigation links, expands, and others
- Doesn't retrieve records with dependent objects

11.4 Client Troubleshooting

11.4.1 Debugging the SAP Service and Asset Manager Client

Procedure

1. **Enable logging on SAP Business Technology Platform Mobile Services:**
 - a. Open *Mobile Service for Development and Operations* in the SAP Web IDE.



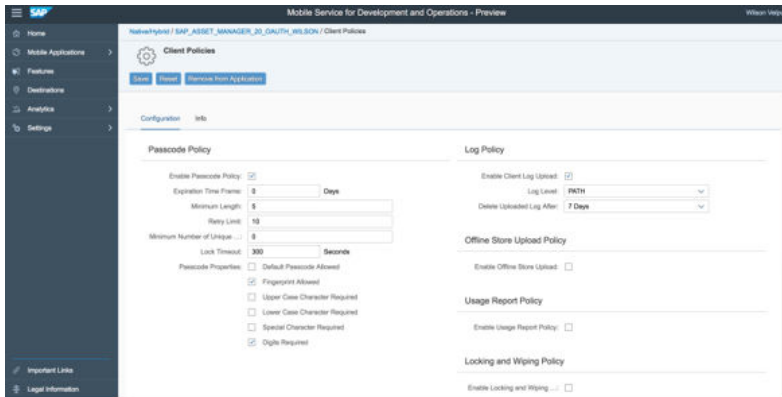
- b. Select the native/hybrid application in the [Object Overview](#).

Name	Application ID	Vendor	Creation Date (UTC-0500)
SAP_ASSET_MANAGER_20_OAUTH_WILSON	com.sap.sam20.oauth.wilson	SAP	2018-08-09 13:55
SAP_Asset_Manager_20_oAuth_DEEPOVE	com.sap.sam20.oauth.deeptime	SAP	2018-08-09 11:33
SAP_Asset_Manager_20_GRI	com.sap.sam20.oauth.854203	SAP	2018-07-12 16:23
SAP_Asset_Manager_20_Aaron	com.sap.sam20.oauth.859501	SAP	2018-07-12 16:23
Warehouse Mgmt Cart Picker Demo	com.sap.poc.mdm.whm.dsa		2018-07-03 04:45
SAP_Asset_Manager_20_oAuth_Steve	com.sap.sam20.oauth.854215		2018-06-22 15:31
SAP_Asset_Manager_20_oAuth_Wilson	com.sap.sam20.oauth.854213	SAP	2018-06-21 10:30
SAP_Asset_Manager_20_oAuth_Ying	com.sap.sam20.oauth.857859	SAP	2018-05-14 16:25
SAM	com.sap.com		2018-04-23 09:42
ssw900 service	com.sap.sam.950		2017-06-02 11:02
SAP Asset Manager Client 900 Demo LCM	com.sap.sam.sagphr.demo	SAP	2017-06-01 16:25
SAP SAM Demo Service	com.sap.sam.sagphr		2017-04-27 15:25

- c. Select the [Application](#), then select [Client Policies](#).

Name	State
App Update	OK
Client Policies	OK
Cloud Build	Incomplete Configuration
Connectivity	OK
Office	OK
Security	OK

- d. Enable the log policy.



2. Enable logging per user on SAP Business Technology Platform Mobile Services:

- Open *Mobile Service for Development and Operations* in the SAP Web IDE if it's not already open.
- Expand *Analytics* and select *User Registrations*.
- Select the log settings of your desired user, then select *Client Policies*.

Registration ID	User Name	Application ID	Device Type	Beta Tester	Last Connection (UTC-0500)	Usage Upload (UTC-0500)	Wipe	Actions
b3f843ac534450 be22b35a6a010d7	1834213	com.sap.sam20.ouat h.deepdive	iPad	☐	2018-08-09 14:28:58	☐	☐	Log Settings
712923f8dd1bed4 c201e4c4a5aedf29	1834213	com.sap.sam20.ouat h.wilson	iPad	☐	2018-08-09 14:23:42	☐	☐	Log Settings
4b1f821cf851433 88b355afac8a25	1834213	com.sap.sam20.ouat h.wilson	Unknown	☐	2018-08-09 14:11:48	☐	☐	Log Settings
5b092ae8bba11a8 71b1356d8033b50 ec	1834213	com.sap.sam20.ouat h.1834213	iPad	☐	2018-08-09 13:52:25	☐	☐	Log Settings
5534f0e30f49f9f42 d159a68c73de436	1834213	com.sap.sam20.ouat h.1834213	Unknown	☐	2018-08-09 11:45:25	☐	☐	Log Settings
2b295701f8aa88d8 a54c9369eeae6df	P1942591969	com.sap.sam20.ouat h.1834213	iOS	☐	2018-08-08 14:38:05	☐	☐	Log Settings
e84277eac02133 03c8e46c927b62ee 2	D043678	com.sap.sam.saphi re.demo	iOS	☐	2018-08-01 13:19:56	☐	☐	Log Settings

- Enable the *Log Policy*.

Client Log Settings

Enable Client Log Upload:

☒

Level:

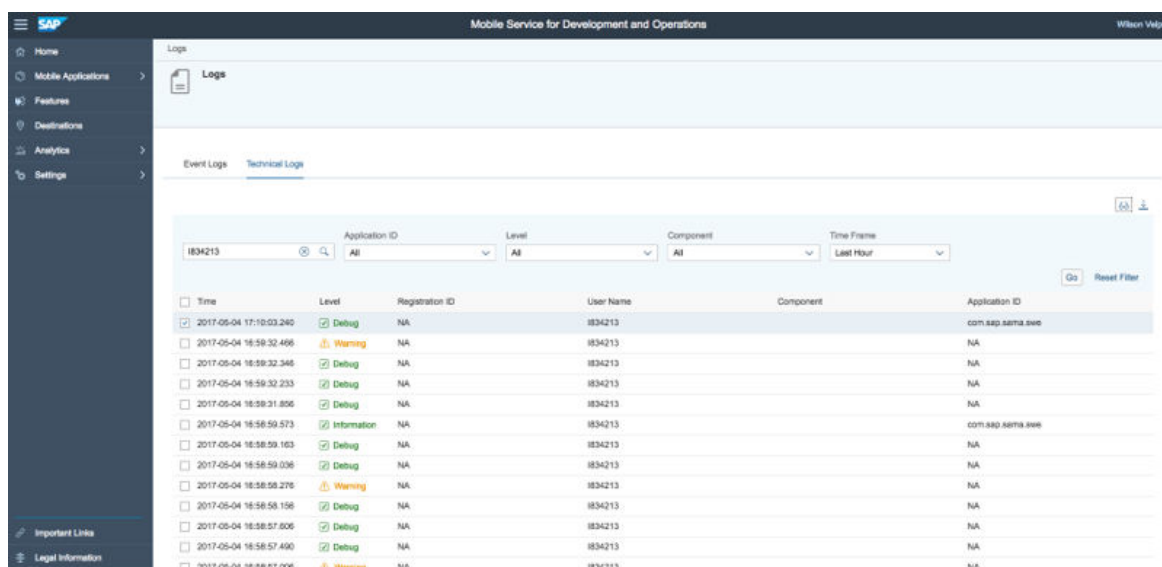
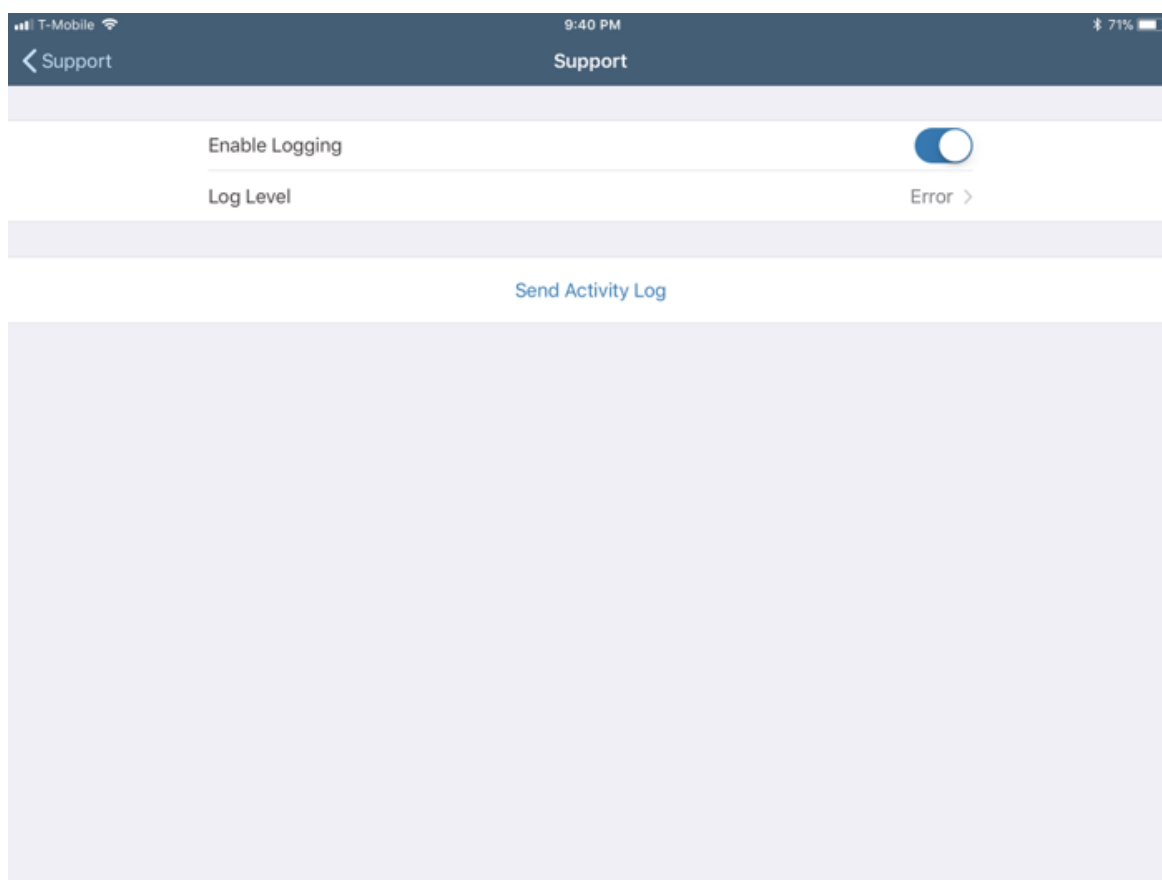
NONE

Delete Uploaded Log After:

7 days

Save Cancel

3. Upload the client logs to SAP Business Technology Platform Mobile Services.



4. Use the Gateway trace logs found on your back-end system. See [SAP Gateway Tracing Tools \[page 140\]](#) for more information.

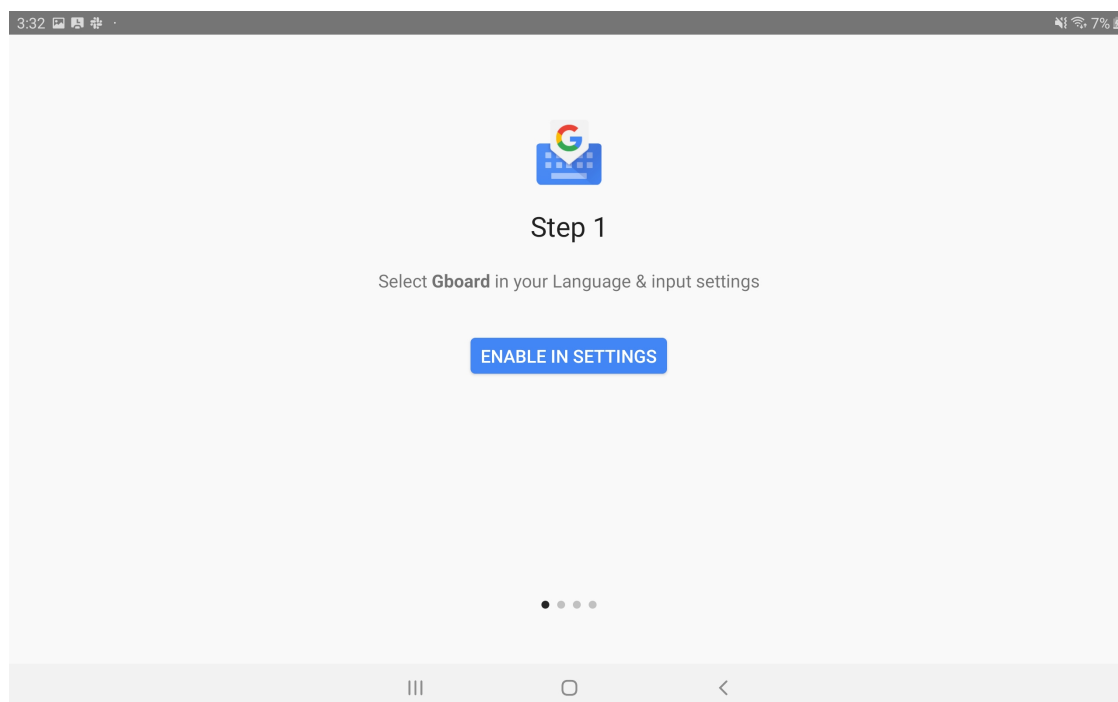
11.4.2 Numeric Input on Android Devices

If your Android device uses an OEM-specific (non-Google) software keyboard, it may prevent you from entering decimals and negative numbers in fields where you're entering a reading value, such as measuring point screens.

If you or your mobile device users are unable to enter decimal points and negative values on their Android devices, take the following steps to install Gboard on your Android device:

Installing the Gboard App onto Your Mobile Device

1. Search for and install the [Gboard](#) app from the [Google Play](#) store onto Android mobile devices running SAP Service and Asset Manager (<https://play.google.com/store/apps/details?id=com.google.android.inputmethod.latin>). Gboard is the default, Google-provided, Android keyboard.
2. Enable [Gboard](#) as the default keyboard input. See the following substeps and screenshots for examples of how to install Gboard. Note that your Android screens may not look exactly like the screenshots due to manufacturer differences in design.
 1. Open the [Gboard](#) app after you've installed it. Gboard displays a message requesting you to enable your language and input settings. Tap the [Enable in Settings](#) button to continue.



A pop-up window displays, allowing you to select which keyboard you wish to enable.

Note

If a pop-up window doesn't display during the Gboard set up wizard, continue to the *Manually Setting Gboard Defaults* subsection in this topic to manually apply the Gboard settings.

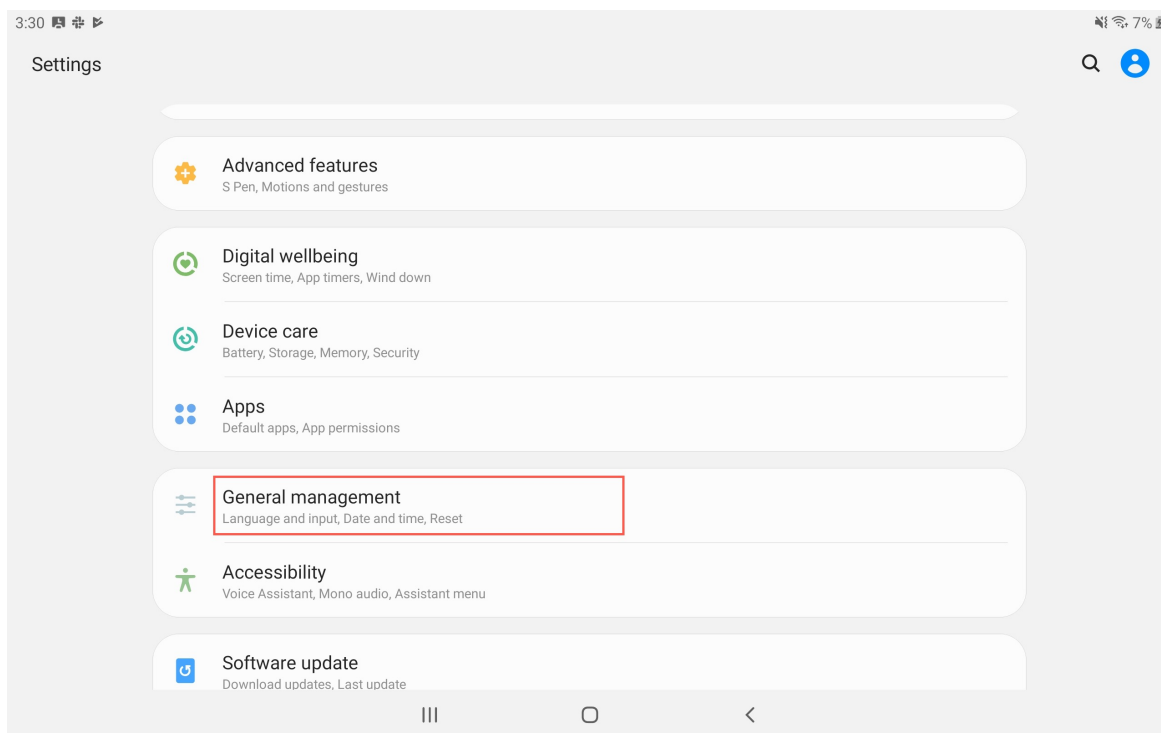
2. Select the [Gboard](#) option.

The Step 2 screen appears in the Gboard set up wizard, prompting you to select the default input method.

3. Tap the [Select Input Method](#) button.
A pop-up window displays, allowing you to select which keyboard you wish to enable.
4. Select the [Gboard](#) option.
5. The other set-up options in the Gboard set up wizard are optional. You can set them or skip.
6. After performing these steps on your Android device that you use for the SAP Service and Asset Manager application, ensure that you can enter measuring point or reading values that include decimal points and a negative number value.

Manually Setting Gboard Defaults

1. Tap on [Settings](#) from your app choices listed on your phone.
The [Settings](#) feature opens.
2. Tap the [General Management](#) option.



3. Tap the [Language and input](#) selection on the [General Management](#) screen. Select [Gboard](#) as the default keyboard.
4. Tap the [Default keyboard](#) selection on the [Language and input](#) screen. Select [Gboard](#) as the default keyboard.
5. After performing these steps on your Android device that you use for the SAP Service and Asset Manager application, ensure that you can enter measuring point or reading values that include decimal points and a negative number value.

11.4.3 Errors When Deploying and Activating the Mobile Development Kit

You can get the following error when activating and deploying the Mobile Development Kit:

Build failed

Please follow the relevant troubleshooting tips below:

ERROR: "Unable to find local grunt"

- Right-click the project folder, select "Clean npm Folder", and build again.

ERROR: "npm ERR! code EINTERGITY"

- Delete the "package-lock.json" file from the project and build again..

To resolve the error, right-click the MDKWebpackFactory folder and select [Clean npm Folder](#). If cleaning the npm folder doesn't resolve the issue, delete the MDKWebpackFactory folder and redeploy your project.

11.4.4 Backing Up SAP Service and Asset Manager Client Data

If the SAP Service and Asset Manager application is removed from a mobile device or stops working, you can recover your data that was stored in the application.

Use the following solutions to reinstall the SAP Service and Asset Manager client and recover the user data:

Reinstall the Application

If the application stops running or is removed from the mobile device, reinstall the client.

Reinstall the application onto the mobile device. See [Installing the SAP Asset Manager Client](#) topic in the *SAP Asset Manager User Guide*.

Onboarding a User After App Deletion

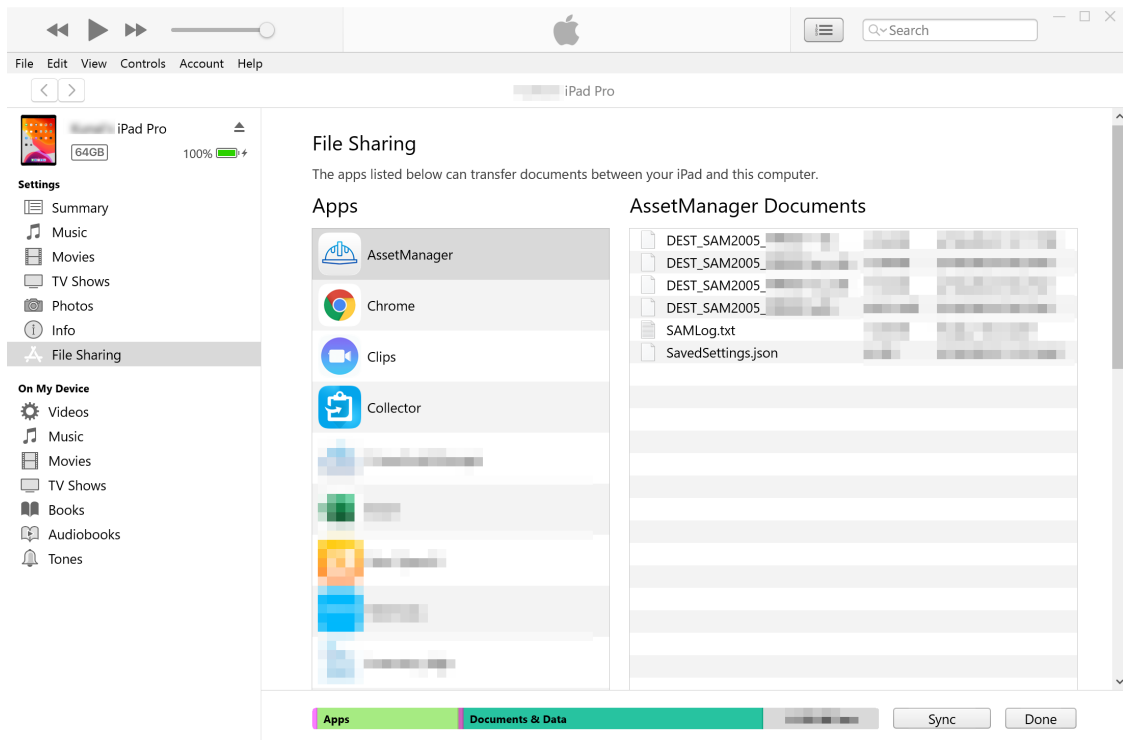
If the SAP Service and Asset Manager app was deleted and reinstalled, the data from the app is lost, including any data that was not synced to the back end.

1. Reinstall the application onto the mobile device. See [Installing the SAP Asset Manager Client](#) topic in the *SAP Asset Manager User Guide*.
2. Onboard through the SAP BTP services app.
3. Once the onboarding is complete, download data onto the mobile device by performing an initial sync.

App Stops Running and Doesn't Restart

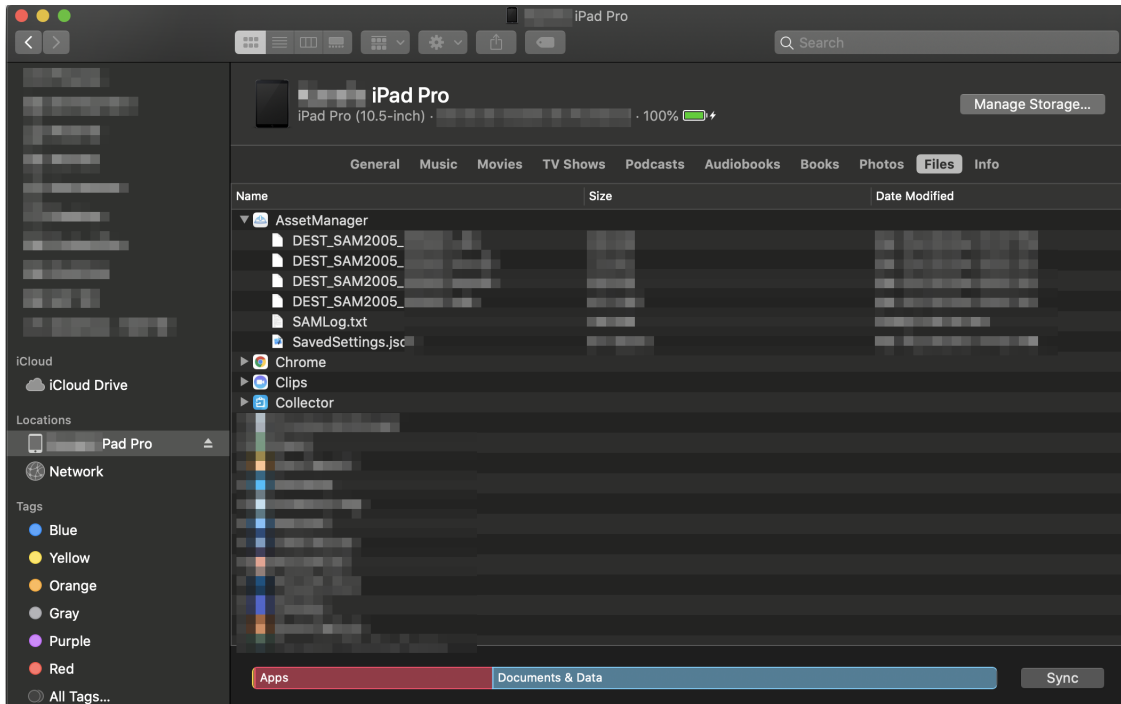
If the SAP Service and Asset Manager app stops running and doesn't restart, use the following steps:

1. Save the database files from the app to a location you choose on a PC or a Mac.
 1. iOS: Use [Finder](#) on Mac or iTunes on Windows



As of the 2005 release of the application, you can also use the [Files](#) application.

2. Android: the [Android File Transfer](#) tool



2. Reinstall the app. See the [Installing the SAP Asset Manager Client](#) topic in the *SAP Asset Manager User Guide*.
3. Copy the database files back onto the mobile device using the same tools for the iOS or Android platform that you used in *Step 1*.
4. Onboard as you would do in the section [Onboarding a User after App Deletion](#).

The app launches and reads the saved files. You don't need to perform an initial sync. The application state is restored.

12 Submitting Improvement Requests

You can submit your improvement request for SAP Service and Asset Manager to the SAP Customer Influence site, a central place for all product improvement requests.

You can browse all improvement requests, submit improvement requests, comment, vote, receive updates, and see who has voted at the SAP Customer Influence site.

Note

Before you submit your improvement, check if a similar improvement hasn't already been submitted. If a similar improvement is already in the system, vote for it instead of submitting a new improvement request.

Procedure

1. Access the SAP Customer Influence site from the following link: <https://influence.sap.com/sap/ino/#/campaign/2665>
2. Log in with your S-user ID.
3. Choose *Improvement Request* on the left panel.
4. Enter the details for your improvement request:

Field	Notes
Project	Prepopulated with SAP Service and Asset Manager. Don't change.
Title	Enter a title that clearly states your request and area of improvement.
Category	Select the category that best fits your request.
Description	Follow the template to enter details about your suggestion. Provide as much detail as possible.
Tags	(Optional) Add tags that can help others find your request.

You can also provide links, attachments, or add co-authors.

5. Click *Submit* when you're ready to submit your improvement request.

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