



**PUBLIC**

SAP Service and Asset Manager

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# **SAP Service and Asset Manager Quick Start Guide**

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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](https://help.sap.com/docs/SAP_SERVICE_ASSET_MANAGER).

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

| Document Version | Date     | Description of Changes                                                                              |
|------------------|----------|-----------------------------------------------------------------------------------------------------|
| 1.0              | NOV 2025 | Original release of the <i>SAP Service and Asset Manager Quick Start Guide</i> guide, version 2511. |

## 2 SAP Service and Asset Manager Installation Prerequisites

To install SAP Service and Asset Manager, ensure the following prerequisites are met:

- A valid subscription to SAP Service and Asset Manager. See [Product Licensing Overview \[page 4\]](#).
- The SAP back end prerequisites are met. See [SAP Back End Prerequisites \[page 11\]](#).
- You have access to your company's SAP BTP Global Account and Subaccount. See [SAP Business Technology Platform Prerequisites \[page 11\]](#).
- **OPTIONAL:** If using certificate-based authentication, acquire the certificates the IdP expects from mobile devices running the SAP Service and Asset Manager application. See the [SAP Cloud Identity Services - Identity Authentication](#) portal page for complete information on working with certificates and Identity Providers.

### ⓘ Note

If you optionally enable certificate based authentication, the Mobile Development Kit client passes the certificate to the IdP for use in authentication as long as the IdP supports and asks for certificates, and certificates are present on the mobile device.

- You have an iOS or Android mobile device or tablet to test the SAP Service and Asset Manager mobile application. See [3693382](#): *Software Release Note - SAP Service and Asset Manager 2511*, for a complete list of device requirements for the SAP Service and Asset Manager application.
- To see if the SAP Service and Asset Manager application supports your language, refer to [Supported Languages](#).

## 2.1 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 (1200 documents FUE/contract year) :
  - **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.

- **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 \[page 4\]](#) 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 | <ul style="list-style-type: none"> <li>• Build forms from an online form designer and assign them to their respective SAP objects.</li> <li>• Manage forms lifecycle (monitor version controls, utilization of data and use import export capabilities)</li> <li>• Access administration panel and backend integration tools</li> <li>• Complete forms from an online Forms Explorer</li> </ul> | INCLUDED  | INCLUDED     | INCLUDED         |

| Application                                         | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Basic Use | Standard Use | Professional Use |
|-----------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------------|------------------|
| SAP Dynamic Forms                                   | Fixed entitlement of <b>1200</b> documents FUE/ contract year                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | INCLUDED  | INCLUDED     | INCLUDED         |
| SAP Service and Asset Manager <b>Basic</b> Personas | <ul style="list-style-type: none"> <li>• <a href="#">Maintenance Technician External</a> (compared to Maintenance Technician Standard and Professional, it is a separate persona with limited functionality, created specially for external workers within your organization)</li> <li>• <a href="#">Field Service Technician External</a> (compared to Field Service Technician Standard and Professional, it is a separate persona with limited functionality, created specially for external workers within your organization)</li> </ul> | INCLUDED  | NOT INCLUDED | NOT INCLUDED     |

| Application                                            | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | Basic Use    | Standard Use | Professional Use |
|--------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------------|
| SAP Service and Asset Manager <b>Standard</b> Personas | <ul style="list-style-type: none"> <li>You can <a href="#">complete forms from SAP Service and Asset Manager</a> (offline use case).</li> <li>You can choose <b>either</b> of the following personas: <ul style="list-style-type: none"> <li><a href="#">Maintenance Technician Standard</a> (manage maintenance notifications and complex asset information)</li> <li><a href="#">Field Service Technician Standard</a> (perform customer service operations)</li> <li><a href="#">Inventory Clerk</a> (manage inventory, goods movements and material documents)</li> <li><a href="#">Warehouse Clerk</a> (optimize the use of various storage bins and stock movements, store stocks from several plants together in a randomly-managed warehouse)</li> </ul> </li> </ul> | NOT INCLUDED | INCLUDED     | INCLUDED         |

| Application                                                | Details                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  | Basic Use    | Standard Use | Professional Use |
|------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|--------------|------------------|
|                                                            | <ul style="list-style-type: none"> <li>• <a href="#">Field Logistics Operator</a> (manage the movement of goods in forwarding and returning scenarios)</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |              |              |                  |
| SAP Service and Asset Manager <b>Professional</b> Personas | <ul style="list-style-type: none"> <li>• You can choose <b>multiple</b> personas, as well as <b>standard</b> and <b>custom</b> personas: <ul style="list-style-type: none"> <li>• <a href="#">Field Service Technician Professional</a> (perform customer service operations including meter management processes)</li> <li>• <a href="#">Maintenance Technician Professional</a> (maintain enterprise assets and perform the job with complex asset information)</li> <li>• <a href="#">Safety Technician</a> (perform clearance activities, isolation of equipment and manage permits)</li> </ul> </li> <li>• You can <a href="#">complete forms from SAP Service and Asset Manager</a> (offline use case).</li> </ul> | NOT INCLUDED | NOT INCLUDED | INCLUDED         |

| Application                         | Details                                                   | Basic Use    | Standard Use | Professional Use |
|-------------------------------------|-----------------------------------------------------------|--------------|--------------|------------------|
| SAP Field Service Management Mobile | See <a href="#">SAP Field Service Management Mobile</a> . | NOT INCLUDED | INCLUDED     | INCLUDED         |
| SAP Maintenance Assistant           | See <a href="#">SAP Maintenance Assistant</a> .           | 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 \[page 9\]](#)).

## 2.1.1 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 |                               | <input checked="" type="checkbox"/> |
| 68 |                               | <input checked="" type="checkbox"/> |
| 69 | PA                            | <input checked="" type="checkbox"/> |
| 71 | SAP Service and Asset Manager | <input checked="" type="checkbox"/> |
| 72 | SPECIAL MODULE TYPE 2         | <input type="checkbox"/>            |
| 73 | SPECIAL MODULE TYPE 3         | <input type="checkbox"/>            |
| 74 | SPECIAL MODULE TYPE 4         | <input type="checkbox"/>            |
| 75 | SPECIAL MODULE TYPE 5         | <input type="checkbox"/>            |
| 76 | Special Module Type 6         | <input type="checkbox"/>            |
| 77 | Special Module Type 7         | <input type="checkbox"/>            |
| 78 | Special Module Type 8         | <input type="checkbox"/>            |
| 79 | Special Module Type 9         | <input type="checkbox"/>            |
| 80 | Special Module Type 10        | <input type="checkbox"/>            |
| 81 | Special Module Type 11        | <input type="checkbox"/>            |
| 82 | Special Module Type 12        | <input type="checkbox"/>            |
| 83 | Special Module Type 13        | <input type="checkbox"/>            |
| 84 | Special Module Type 14        | <input type="checkbox"/>            |
| 85 | Special Module Type 15        | <input type="checkbox"/>            |
| 86 | Special Module Type 16        | <input type="checkbox"/>            |
| 87 | Special Module Type 17        | <input type="checkbox"/>            |
| 88 | Special Module Type 18        | <input type="checkbox"/>            |
| 89 | Special Module Type 19        | <input type="checkbox"/>            |
| 93 |                               | <input checked="" type="checkbox"/> |
| 94 |                               | <input checked="" type="checkbox"/> |
| 95 |                               | <input checked="" type="checkbox"/> |

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 \[page 9\]](#) 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

## 2.2 License Matrix for Cloud Foundry and Neo Platforms

| Platform      | Required Services                                                                                                                         |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Cloud Foundry | <ul style="list-style-type: none"><li>• Application Runtime</li><li>• Mobile Services</li><li>• SAP Business Application Studio</li></ul> |
| Neo           | <ul style="list-style-type: none"><li>• Mobile Services</li><li>• Mobile Development Kit SAP Web IDE</li></ul>                            |

### → 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](#).

## 2.3 SAP Back End Prerequisites

For the complete list of back end requirements, refer to the [3693382](#): *Software Release Note - SAP Service and Asset Manager 2511*. Additionally, please note the following information and prerequisites:

- You have a valid user in the SAP system and client, in order to perform the SAP back end system setup.
- SAP S/4HANA Cloud Private edition **OR** SAP S/4HANA On-Premise edition (1610 FPS 01 or higher, 1709, 1809, 1909) **OR** SAP ERP 6.0 enhancement package 7 or 8.
- SAP Netweaver Gateway: SAP\_GWFND 7.40 SP17 or later
- Cloud Connector

### ⓘ Note

- The **SAP Mobile Add-On**, known as **Mobile Application Integration Framework**, is embedded in SAP S/4HANA 1909.
  - Therefore, the SAP Mobile Add-On as a back end prerequisite is relevant for you **only** if you are on ECC or on an older SAP S/4HANA version (1610 to 1809).
- With the SAP S/4HANA Cloud Public edition back-end system, you must use [SAP Maintenance Assistant](#).

## 2.4 SAP Business Technology Platform Prerequisites

SAP Service and Asset Manager uses the oData service that is provided with the SAP Business Technology Platform Mobile Services. Please note the following prerequisites and information related to the SAP BTP:

- Ensure that an SAP Business Technology Platform Mobile Services account with an active mobile services account is available. See [Step 3 \[page 13\]](#) in *Quick Installation Overview for SAP Service and Asset Manager*.
- Cloud Foundry only: [Mobile Services](#) and [Application Runtime](#) are provisioned in the SAP Business Technology Platform subaccount.
- The application MDK is created in SAP Business Technology Platform Mobile Services.

#### 📘 Note

- Your organization may have multiple SAP BTP global accounts with different product licenses associated with them. Please make sure one of those licenses is associated with the global account that end users have access to. If a corresponding license that grants entitlements for SAP Service and Asset Manager is not associated with the global account that end users have access to, SAP Service and Asset Manager will not be a visible application available for use.
- If the license for Mobile Execution and SAP Service and Asset Manager is not assigned to the correct global account, please reach out to your account executive. They can correctly assign the product SKU to the global account in which you wish to operate SAP Service and Asset Manager.

# 3 Quick Installation Overview for SAP Service and Asset Manager

This quick start guide provides the essential high-level steps to set up SAP Service and Asset Manager end to end.

| Step | Action                                                                                 | Link                                                                                                                                                                                                                                                             | Role                                                     |
|------|----------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| 1    | Ensure that all prerequisites are met before installing SAP Service and Asset Manager. | <a href="#">SAP Service and Asset Manager Installation Prerequisites [page 4]</a>                                                                                                                                                                                | IT administrator                                         |
| 2    | <b>SAP back end system setup</b>                                                       |                                                                                                                                                                                                                                                                  |                                                          |
| 2.1  | Identify your back end system and perform the relevant setup procedure.                | <ul style="list-style-type: none"> <li>• <a href="#">Mobile Add-On for SAP ERP [page 15]</a></li> <li>• <a href="#">Mobile Add-On for SAP S/4HANA [page 16]</a></li> <li>• <a href="#">MAIF for SAP S/4HANA On-Premise or Private Cloud [page 17]</a></li> </ul> | SAP ERP (ECC) administrator or SAP S/4HANA administrator |
| 2.2  | Perform general configurations for the back end system.                                | <a href="#">General Setup for the SAP Back End System [page 17]</a>                                                                                                                                                                                              | A administrator                                          |
| 2.3  | Activate the SAP Service and Asset Manager Business Configuration Set (BC Set).        | <a href="#">Activating the SAP Service and Asset Manager BC sets [page 19]</a>                                                                                                                                                                                   |                                                          |
| 2.4  | Perform the relevant Authorization Types in Application Persona configuration.         | <a href="#">Configuring Authorization Type by Persona [page 20]</a>                                                                                                                                                                                              | Security expert                                          |
| 2.5  | Activate the SAP Gateway Services                                                      | <a href="#">SAP Gateway System Setup [page 22]</a>                                                                                                                                                                                                               | SAP ERP (ECC) administrator or SAP S/4HANA administrator |
| 3    | <b>SAP Business Technology Platform (SAP BTP) account setup</b>                        |                                                                                                                                                                                                                                                                  |                                                          |
| 3.1  | If you do not have one yet, create an SAP BTP Enterprise Account.                      | <a href="#">Enterprise Accounts</a> in <i>SAP BTP documentation</i>                                                                                                                                                                                              | SAP BTP administrator                                    |
| 3.2  | Provision the SAP BTP subaccounts with the proper entitlements.                        | <a href="#">Creating a Cloud Foundry Subaccount Using a SAP Business Technology Platform Booster [page 23]</a>                                                                                                                                                   |                                                          |

| Step     | Action                                                                                                       | Link                                                                                                                                                                                      | Role                                                     |
|----------|--------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------|
| <b>4</b> | <b>SAP Cloud Connector setup</b>                                                                             |                                                                                                                                                                                           |                                                          |
| 4.1      | Install and configure the Cloud Connector.                                                                   | <a href="#">Setting Up the Cloud Connector [page 28]</a>                                                                                                                                  | IT administrator                                         |
| 4.2      | Perform the additional system mapping configuration.                                                         | <a href="#">Setting up the SAP BTP Cloud Connector System Mapping [page 31]</a>                                                                                                           |                                                          |
| <b>5</b> | <b>Create and update your SAP Mobile Services application using the <i>App Create</i> program.</b>           | <a href="#">Create an SAP Mobile Services App for the SAP Service and Asset Manager Mobile App </a>    | SAP ERP (ECC) administrator or SAP S/4HANA administrator |
| <b>6</b> | <b>SAP Service and Asset Manager application deployment</b>                                                  |                                                                                                                                                                                           |                                                          |
| 6.1      | Set up the SAP Business Application Studio (BAS).                                                            | <a href="#">Setting Up the SAP Business Application Studio [page 32]</a>                                                                                                                  | MDK developer                                            |
| 6.2      | Download and import SAP Service and Asset Manager metadata definitions into SAP Business Application Studio. | <a href="#">How to deploy SAP Service and Asset Manager metadata definitions to Mobile Services </a> |                                                          |
| 6.3      | Deploy SAP Service and Asset Manager metadata definitions into the SAP Mobile Services application.          |                                                                                                                                                                                           |                                                          |
| <b>7</b> | <b>Onboarding for the SAP Service and Asset Manager client</b>                                               |                                                                                                                                                                                           |                                                          |
| 7.1      | Obtain SAP Service and Asset Manager onboarding URL or QR code.                                              | <a href="#">Obtain SAP Service and Asset Manager Onboarding URL or QR Code [page 36]</a>                                                                                                  | Business expert                                          |
| 7.2      | Download and install the SAP Service and Asset Manager client into your mobile device.                       | <a href="#">Installing the SAP Service and Asset Manager Client [page 38]</a>                                                                                                             |                                                          |
| 7.3      | Log in to the SAP Service and Asset Manager application using a QR code.                                     | <a href="#">Initial Log In to the SAP Service and Asset Manager Application [page 39]</a>                                                                                                 |                                                          |
| <b>8</b> | <b><a href="#">Troubleshooting [page 41]</a></b>                                                             |                                                                                                                                                                                           |                                                          |
|          | SAP Back End Performance Tracing Tools                                                                       | <a href="#">SAP Back End Performance Tracing Tools [page 42]</a>                                                                                                                          |                                                          |
|          | SAP Gateway Error Logs                                                                                       | <a href="#">SAP Gateway Error Logs [page 43]</a>                                                                                                                                          |                                                          |
|          | SAP Gateway Tracing Tools                                                                                    | <a href="#">SAP Gateway Tracing Tools [page 44]</a>                                                                                                                                       |                                                          |
|          | Cloud Connector Log and Trace Files                                                                          | <a href="#">Cloud Connector Log and Trace Files [page 46]</a>                                                                                                                             |                                                          |

| Step | Action                                                          | Link                                                                                      | Role |
|------|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------|------|
|      | SAP Business Technology Platform Mobile Services Logs           | <a href="#">SAP Business Technology Platform Mobile Services Logs [page 47]</a>           |      |
|      | SAP Business Technology Platform Mobile Services Network Traces | <a href="#">SAP Business Technology Platform Mobile Services Network Traces [page 49]</a> |      |
|      | Internet Communications Trace                                   | <a href="#">Internet Communications Trace [page 45]</a>                                   |      |
|      | Mobile Client and Device Logs                                   | <a href="#">Mobile Client and Device Logs [page 51]</a>                                   |      |

#### 📘 Note

- This procedure describes the minimum required installation steps. For additional installation and customization options, refer to the [SAP Service and Asset Manager Installation Guide](#).
- Once you are done with the installation steps, you can continue with configuring SAP Service and Asset Manager. See [SAP Service and Asset Manager Configuration Guide](#).

## 3.1 SAP Back End System Setup

### 3.1.1 Installing the Relevant Back End System

#### 3.1.1.1 Mobile Add-On for SAP ERP

If you are on the SAP ERP back end system, you need to install the SAP Mobile Add-On for the SAP ERP back end alongside the requisite service packs, in order to provide the required OData services for specific versions of SAP Service and Asset Manager. Follow the installation steps in [SAP Note 2660361](#), *SAP Service and Asset Manager Mobile Add-On for ERP Installation Primary Note*.

#### 📘 Note

For more information, see:

- [2577248](#): Release Information Note - Mobile Add-On for ERP 6.30 and Support Packages
- [2660862](#): SAP BTP Mobile Services Setup Info for SAP Service and Asset Manager with SAP ERP System
- [Installing the SAP Mobile Add-On for SAP ERP](#)
- [SAP ERP Mobile Add-On](#) documentation

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).

## Supported Versions

Ensure that the corresponding Mobile Add-On for SAP ERP and service packs are installed for the SAP Service and Asset Manager application you wish to run. The following versions are available for the compatible SAP ERP **6.0 EHP7 SP14 systems or higher**:

### SAP ERP 6.0 Enhancement Package 7

| Software Component | Release | Support Package |
|--------------------|---------|-----------------|
| SAP_ABA            | 740     | SP17 or higher  |
| SAP_APPL           | 617     | SP14 or higher  |
| SAP_BASIS          | 740     | SP17 or higher  |
| SAP_GWFND          | 740     | SP17 or higher  |
| SAP_UI             | 740     | SP17 or higher  |
| IS_UT              | 617     | SP14 or higher  |

### SAP ERP 6.0 Enhancement Package 8

| Software Component | Release | Support Package |
|--------------------|---------|-----------------|
| SAP_ABA            | 750     | SP08 or higher  |
| SAP_APPL           | 618     | SP07 or higher  |
| SAP_BASIS          | 750     | SP08 or higher  |
| SAP_GWFND          | 750     | SP08 or higher  |
| SAP_UI             | 750     | SP08 or higher  |
| IS_UT              | 618     | SP07 or higher  |

## 3.1.1.2 Mobile Add-On for SAP S/4HANA

If you are on the SAP S/4HANA back end system, you need to install the SAP Mobile Add-On for SAP S/4HANA back end alongside the requisite service packs, in order to provide the required OData services for specific versions of SAP Service and Asset Manager. Follow the installation steps in [SAP Note 2493602](#), *SAP Service and Asset Manager Mobile Add-On for S/4HANA 1.0 Installation Primary Note*.

### Note

For more information, see:

- [Installing the SAP Mobile Add-On for SAP S/4HANA 1909 and Earlier Versions](#)
- [SAP S/4HANA Mobile Add-On documentation](#)

## Supported Versions

Ensure that the corresponding Mobile Add-On for SAP S/4HANA and service packs are installed for the SAP Service and Asset Manager application you wish to run. The following versions are available for the compatible SAP S/4HANA **1610 FPS (Feature Pack Stack) 01 systems or higher**:

| Software Component             | Release | Support Package  |
|--------------------------------|---------|------------------|
| SAP S/4HANA on-premise edition | 1610    | FPS 01 or higher |
| SAP S/4HANA on-premise edition | 1709    | 1709             |
| SAP S/4HANA on-premise edition | 1809    | 1809             |

### Note

If you are running SAP Service and Asset Manager in SAP S/4HANA on-premise edition **1909 or higher**:

- Refer to [MAIF for SAP S/4HANA On-Premise or Private Cloud \[page 17\]](#).
- SAP Mobile Add-On installation is **not required**. The Mobile Application Integration Framework used by SAP Service and Asset Manager is included as part of SAP S/4HANA 1909 on-premise.

### 3.1.1.3 MAIF for SAP S/4HANA On-Premise or Private Cloud

To support SAP Service and Asset Manager on the **SAP S/4HANA On-Premise or Private Cloud** system with release version **1909 and above**, you need to configure MAIF as described in SAP Note [2977434](#)  *SAP Service and Asset Manager: Mobile Application Integration Framework for S/4HANA on-premise or private cloud edition Installation Primary Note*.

### Note

For more information, refer to the [Mobile Application Integration Framework \(MAIF\) Product Page](#).

## 3.1.2 General Setup for the SAP Back End System

### Procedure

1. Set up MAIF number range by executing transaction [SNRO](#).

MAIF uses the [Number Range](#) object to generate a readable record ID for runtime data. Maintain these number ranges as follows:

| Number Range Object | Interval | Usage                     |
|---------------------|----------|---------------------------|
| /MFND/CS1           | 01       | Client state record ID    |
| /MFND/DQ1           | 01       | Dependent queue record ID |
| /SYCLO/C_2          | 01       | Push instance record ID   |

## 2. Activate HTTP Services by using transaction [SICF](#) (HTTP Service Hierarchy Maintenance).

Activate HTTP services for the ConfigPanel and the Administration and Monitoring tool using the following information:

| ICF Service Path                     | Description                              |
|--------------------------------------|------------------------------------------|
| /default_host/sap/bc/webdynpro/syclo | Activates service node including subnode |

- Verify that service activation is completed through transaction [/SYCLO/ADMIN](#).
- Activate any other ICF services required for Web Dynpro application as prompted.

## 3. Define user roles and authorizations through transaction [PFCG](#) (Role Maintenance).

Define the user role with required authorization for SAP Service and Asset Manager and MAIF using the following information:

| Authorization                                        | Description                                          |
|------------------------------------------------------|------------------------------------------------------|
| Authorization object: /MERP/SAM<br>Activity: Execute | Regular SAP Service and Asset Manager user           |
| Authorization object: /SMFND/A01<br>Activity: Delete | Admin user who can run system purge utility programs |

## 4. Define the essential authentications to call the OData service through the SAP Gateway.

- The following table lists the authorization objects required to run the OData service:

| Authorization Object | Authorization Attribute | Value |
|----------------------|-------------------------|-------|
| /MERP/SAM            | ACTVT                   | 16    |
| P_ORGIN              | INFTY                   | 0105  |
|                      | SUBTY                   | 0001  |
| P_PERNR              | INFTY                   | 0001  |
|                      | SUBTY                   | *     |

| Authorization Object | Authorization Attribute | Value |
|----------------------|-------------------------|-------|
|                      | INFTY                   | 0002  |
|                      | SUBTY                   | *     |
|                      | INFTY                   | 0006  |
|                      | SUBTY                   | *     |
|                      | INFTY                   | 0105  |
|                      | SUBTY                   | *     |

- For an ERP system Gateway (GW) HUB installation scenario, the following authorization object is required when a user connects from a HUB system to an ERP system:

| Authorization Object | Authorization Attribute | Value             |
|----------------------|-------------------------|-------------------|
| S_RFCACL             | ACTVT                   | 16                |
|                      | RFC_CLIENT              | <CLIENT SPECIFIC> |
|                      | RFC_EUSER               | Y                 |
|                      | RFC_INFO                | *                 |
|                      | RFC_SYSID               | <SYSTEM SPECIFIC> |
|                      | RFC_TCODE               | *                 |
|                      | RC_USER                 |                   |

## Next Steps

Continue with [Activating the SAP Service and Asset Manager BC sets \[page 19\]](#).

## 3.1.3 Activating the SAP Service and Asset Manager BC sets

### Prerequisites

See [General Setup for the SAP Back End System \[page 17\]](#).

## Context

To activate the SAP Service and Asset Manager BC sets, perform the following steps:

## Procedure

1. In [SAP GUI](#), use the transaction code [SCPR20](#) to implement the following:

| SAP Service and Asset Manager BC Set                                                                                                                                                                                                 | Implementation Scenario                                                                                                                                              |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| /MERP/SAP_SRV_ASSET_MANAGER_<XXXX>>_REF                                                                                                                                                                                              | Standard Plant Maintenance execution business processes. This BC set includes usage of Asset Central, Crew Management, Customer Service, and Field Operations Worker |
| <div><div> <b>Note</b></div><div>Replace the &lt;XXXX&gt; with the application release version. For example, <a href="#">2010</a>.</div></div>      |                                                                                                                                                                      |
| <div><div> <b>Note</b></div><div>For more information, refer to <a href="#">Application BC Sets</a> in <i>MAIF Installation Guide</i>.</div></div> |                                                                                                                                                                      |

2. Click [Activate](#).

## Next Steps

Complete [Configuring Authorization Type by Persona](#) [page 20].

## 3.1.4 Configuring Authorization Type by Persona

### Prerequisites

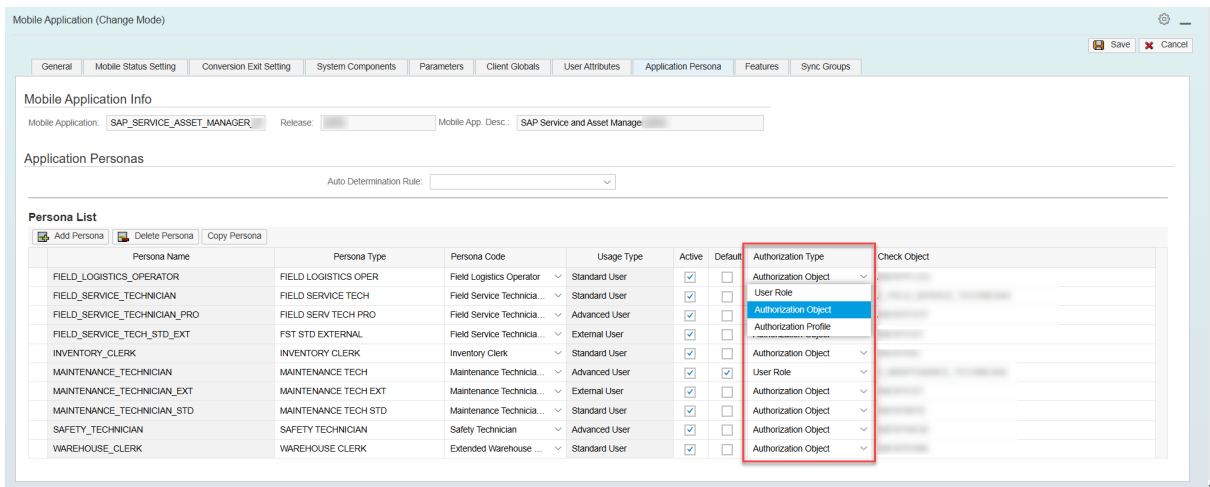
See [Activating the SAP Service and Asset Manager BC sets](#) [page 19].

### Persona-Based Authorizations

For mobile users to access specific persona(s) in the SAP Service and Asset Manager application, it is required to perform either of the following [Authorization Types](#) in [Application Persona](#) configuration:

- **Authorization Object**

- Authorization Profile
- User Role



## Authorization Object

This is the default Authorization Type used in Application Persona configuration. By default, each persona is associated with a standard, pre-defined Authorization Object. You can assign the pre-defined Authorization Objects to users as needed. The authorization objects are then used to determine the user persona.

See the following table about required Authorization Objects for users to access specific persona(s) in the mobile application:

| Persona Name                 | Authorization Object | Authorization Attribute | Value |
|------------------------------|----------------------|-------------------------|-------|
| FIELD_LOGISTICS_OPERATOR     | /MERP/FLOG           | ACTVT                   | 16    |
| FIELD_SERVICE_TECHNICIAN     | /MERP/FST            | ACTVT                   | 16    |
| FIELD_SERVICE_TECHNICIAN_PRO | /MERP/FSTP           | ACTVT                   | 16    |
| FIELD_SERVICE_TECH_STD_EXT   | /MERP/CST            | ACTVT                   | 16    |
| INVENTORY_CLERK              | /MERP/SIC            | ACTVT                   | 16    |
| MAINTENANCE_TECHNICIAN       | /MERP/SMT            | ACTVT                   | 16    |
| MAINTENANCE_TECHNICIAN_EXT   | /MERP/CST            | ACTVT                   | 16    |
| MAINTENANCE_TECHNICIAN_STD   | /MERP/MTB            | ACTVT                   | 16    |
| SAFETY_TECHNICIAN            | /MERP/WCM            | ACTVT                   | 16    |
| WAREHOUSE_CLERK              | /MERP/EWM            | ACTVT                   | 16    |

## Authorization Profile

You can create a custom Authorization Profile and associate the profile (as [Check Object](#) in screenshot above) in Application Persona configuration as needed. The authorization profile configured will then be used to determine the user persona.

## User Role

You can create a custom role and associate the role (as [Check Object](#) in screenshot above) in Application Persona configuration as needed. The User Role configured will then be used to determine the user persona.

### Note

- To improve performance, we recommend creating separate roles for each persona and assigning them to the end mobile users.
- For more information about personas in SAP Service and Asset Manager, see [Persona Overviews](#) and [Configuring Personas](#).

## Next Steps

Continue with [SAP Gateway System Setup](#) [page 22].

## 3.1.5 SAP Gateway System Setup

### Prerequisites

See [Configuring Authorization Type by Persona](#) [page 20]

### Procedure

1. Check if Gateway is active through transaction [SPRO](#).

Navigate to ► [IMG](#) ► [SAP Netweaver](#) ► [SAP Gateway](#) ► [OData Channel](#) ► [Configuration](#) ► [Activate or Deactivate SAP Gateway](#) ► to check if the Gateway is active.

2. Maintain system alias through transaction [SPRO](#).

Navigate to ► [IMG](#) ► [SAP Netweaver](#) ► [SAP Gateway](#) ► [OData Channel](#) ► [Configuration](#) ► [Connection Settings](#) ► [SAP Gateway to SAP System](#) ► [Manage SAP System Alias](#) ► to check if the Gateway is active.

3. Register and activate the OData and online services through transaction [/IWFND/MAINT\\_SERVICE](#)
  - a. Click [Add Service](#) and search for the following technical service name:

| Technical Service Name             | Usage                               |
|------------------------------------|-------------------------------------|
| /MERP/SAP_SRV_ASSET_MANAGER_<XXXX> | Standard Plant Maintenance scenario |

- b. Click [Add Selective Services](#) and click [Enter](#).
- c. Click [Add Service](#) and search for the following online service name:

| Technical Service Name             | Usage                                                |
|------------------------------------|------------------------------------------------------|
| /MERP/SAP_ONLINE_LOOKUP_EXT_<XXXX> | SAP Service and Asset Manager online lookup services |

- d. Click [Add Selective Services](#) and click [Enter](#).

#### ⓘ Note

<XXXX> is the release version of the application. For example, [2310](#).

4. Test OData services through transaction [/IWFND/GW\\_CLIENT](#)

#### ⓘ Note

Use HTTP GET method and request URI `/sap/opu/odata/MERP/SAP_SRV_ASSET_MANAGER_<XXXX>/$metadata`.

## 3.2 SAP Business Technology Platform account setup

### 3.2.1 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.

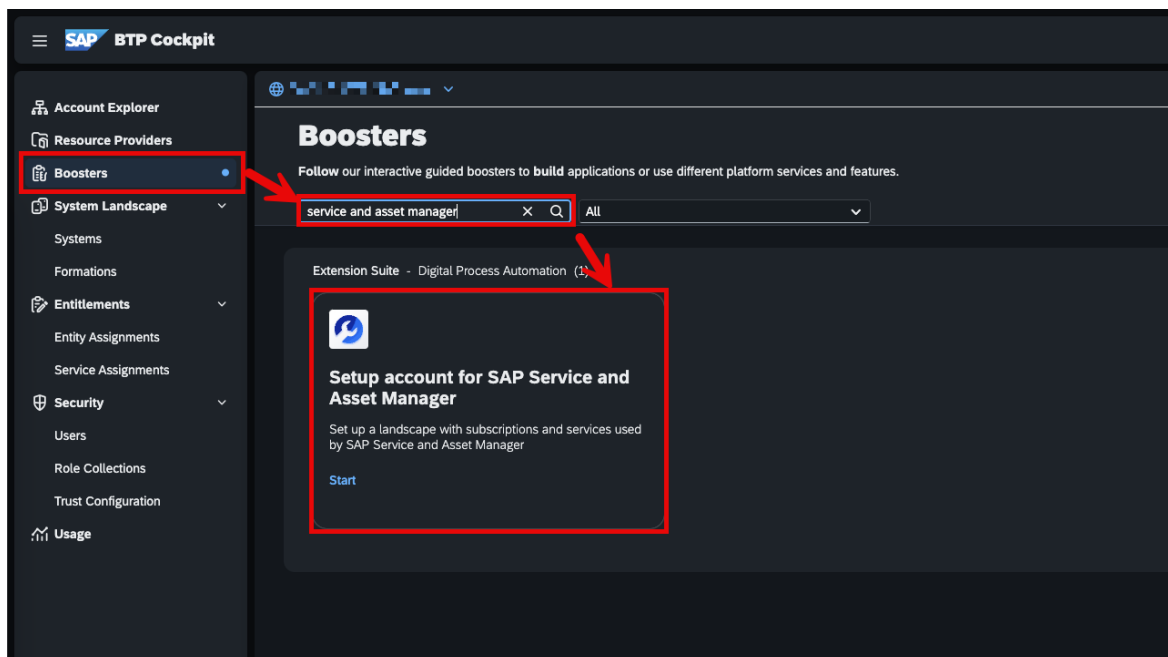
#### ⓘ Note

- 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*.

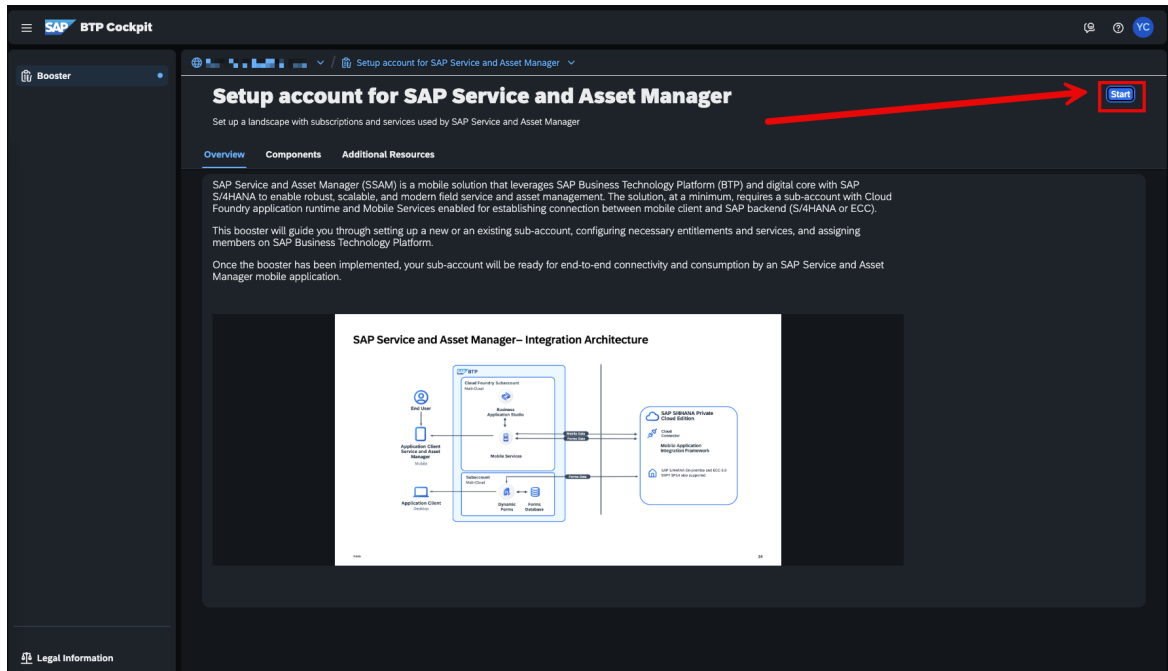
- For detailed information on Cloud Foundry, see the [Enabling Mobile Services](#) page.
- For additional information on entitlements, see the note found in the *Prerequisites for SAP Service and Asset Manager Application Installation* subsection in the [SAP Service and Asset Manager Installation Prerequisites](#) 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.



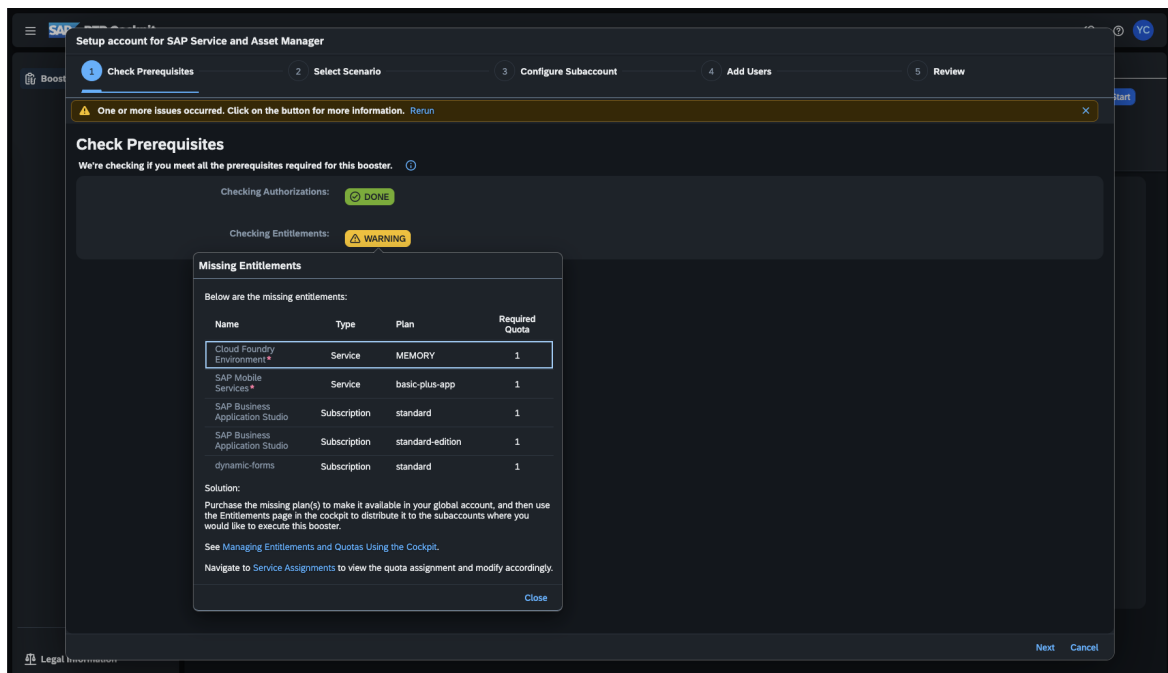
2. Select the [Start](#) button on the booster overview page that displays.



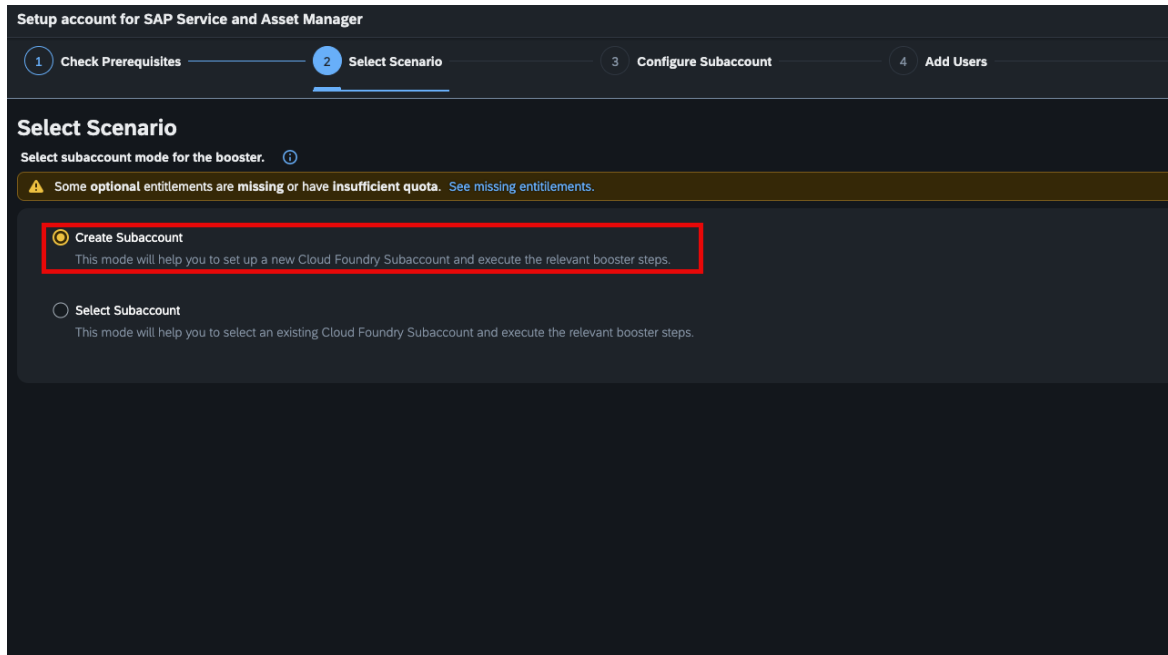
The booster begins a check to ensure the licenses and authorizations in the global account are ready to run the booster. As long as the checks pass with *Done* or *Warning*, the booster can continue running.

### 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.

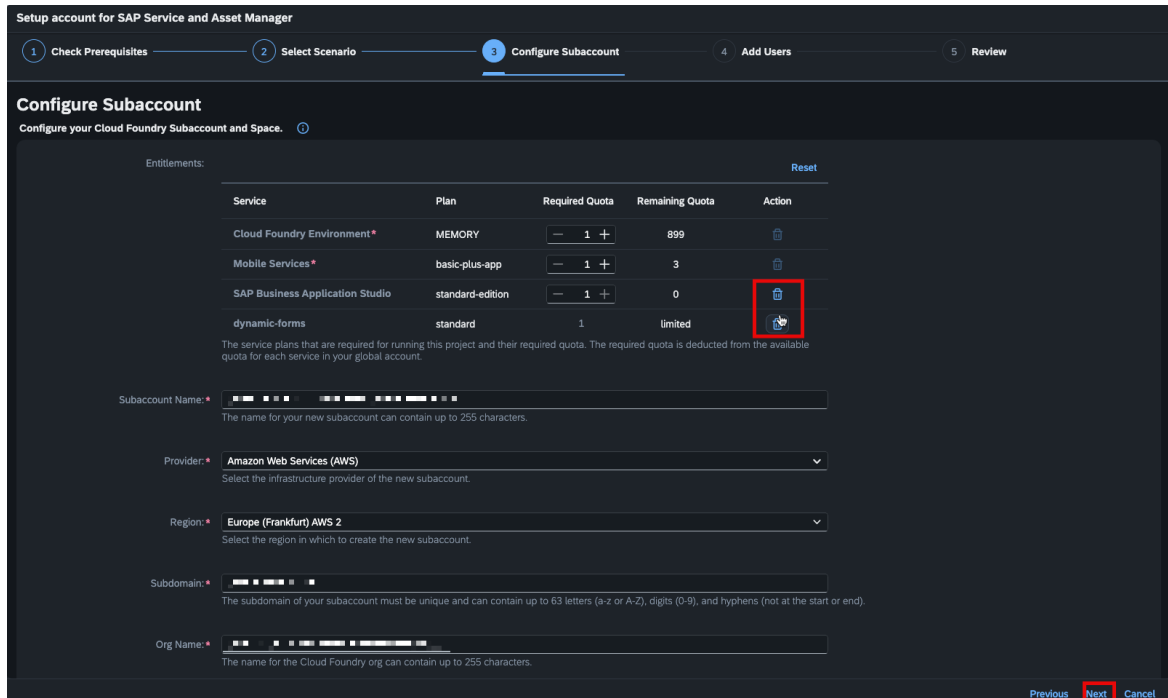


3. Tap *Next* to continue. Then select *Create Subaccount* and click *Next*.



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*.



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".** ✕

Custom Identity Provider for Platform Users: accounts.sap.com

Custom Identity Provider for Applications: accounts.sap.com

Administrators: sap\_asset\_manager\_administrator@sap.com

Developers: sap\_asset\_manager\_developer@sap.com

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 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

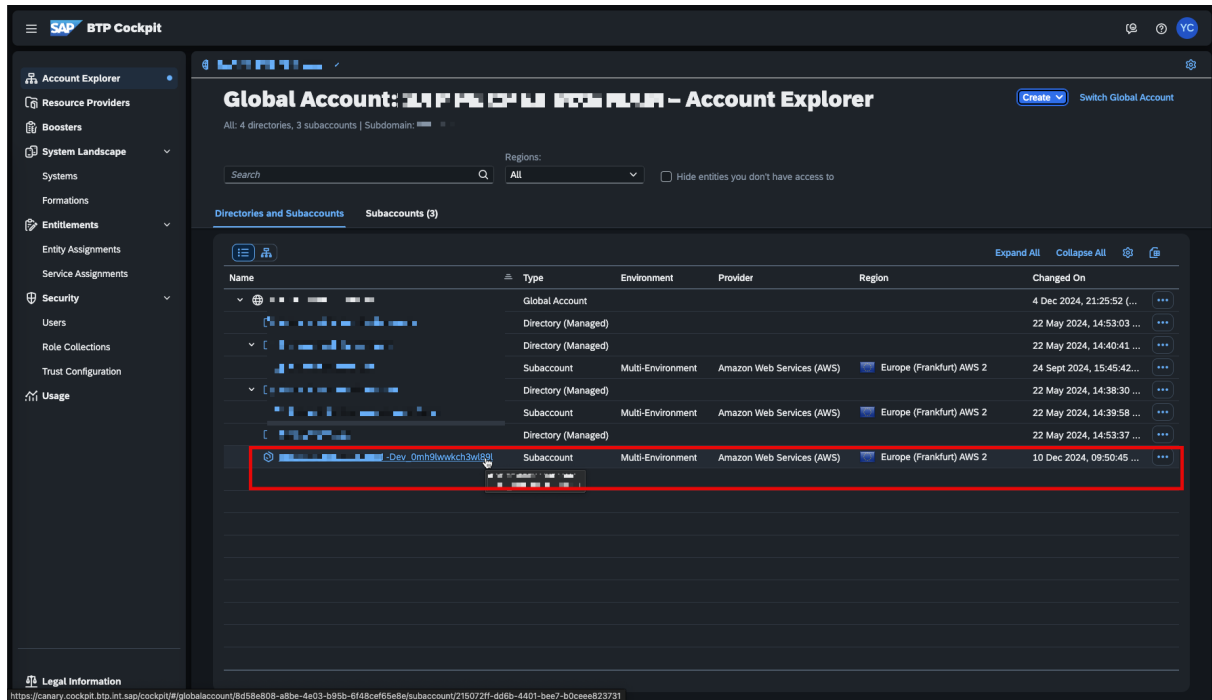
- Confirm that all your subaccount details are correct, then select *Finish*.  
A popup appears that updates in real time as the booster creates the subaccount and prepares it for use with the application.

### Progress

|                               |            |
|-------------------------------|------------|
| Creating Subaccount           | DONE       |
| Assigning Service Quotas      | DONE       |
| Enabling Cloud Foundry        | DONE       |
| Subscribing SaaS Applications | DONE       |
| Creating Space                | DONE       |
| Creating Role Collection      | DONE       |
| Assigning Role Collection     | PROCESSING |

## 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](#) and [Using the SAP Business Technology Platform Mobile Services App Creator to Create an Application](#) topics to create your app in your subaccount.

## 3.3 Setting Up the Cloud Connector

### Prerequisites

Meet the following requirements before beginning this procedure:

- **HTTP Configuration:** SAP Business Technology Platform Mobile Services communicates with the back end using HTTP/OData service
- **Principal Propagation:** Principal propagation to an ABAP system must be configured
- **Certificate User Mapping in ABAP system:** X.509 certificate must be mapped to named user in the SAP ABAP system
- [Creating a Cloud Foundry Subaccount Using a SAP Business Technology Platform Booster \[page 23\]](#)

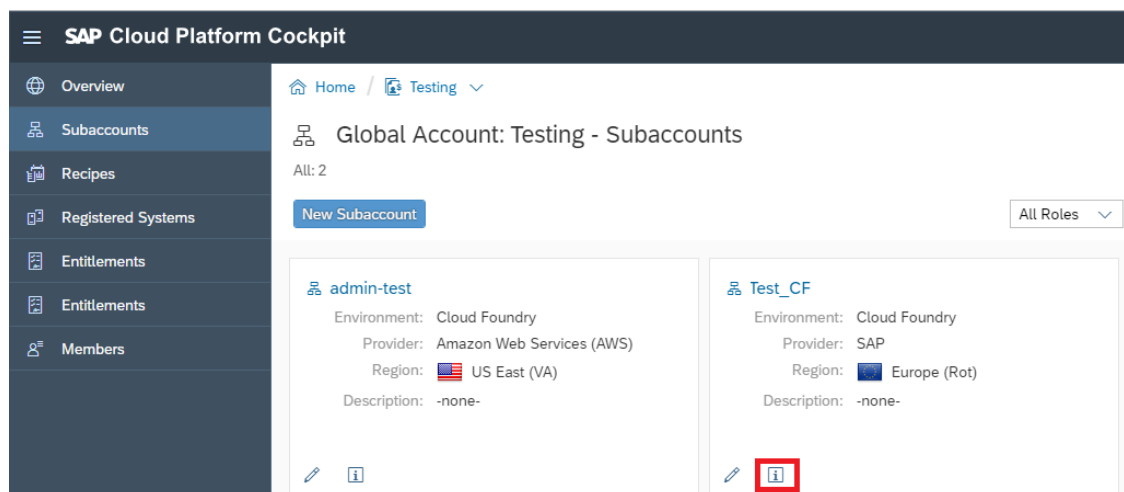
## Context

For detailed information on installing and configuring the Cloud Connector, see the following links:

- [SAP Development Tools for Cloud](#)
- [SAP Business Technology Platform Connectivity – Cloud Connector](#)

## Procedure

1. **Find your subaccount ID:** To set up your subaccount, you must know the subaccount ID.
  - a. Open the SAP Business Technology Platform Cockpit.
  - b. Navigate to the subaccount list of the global account containing your subaccount: choose ► [Home](#) ► [<Your Global Account>](#) ► [Subaccounts](#) ►.
  - c. Find your subaccount in the list. Select the subaccount to navigate into the overview page and see the [Subaccount ID](#).



2. **Add subaccount:**
  - a. The **<Region>** field specifies the SAP Business Technology Platform region that should be used, for example, **Europe (Rot)**. Choose the one you need from the drop-down list.
  - b. For **<Subaccount>** and **<Subaccount User>** (user/password), enter the values you obtained when you registered your account on SAP Business Technology Platform.

### Note

Enter the subaccount **ID** as **<Subaccount>**, rather than its actual (technical) name. See the previous step to determine your subaccount ID. As **<Subaccount User>** provide your **Login E-mail** instead of a user ID.

- c. (Optional) You can define a **<Display Name>** that allows you to easily recognize a specific subaccount in the UI compared to the technical subaccount name.
- d. (Optional) You can define a **<Location ID>** that identifies the location of this Cloud Connector for a specific subaccount.

- e. (Optional) You can provide a **<Description>** of the subaccount that is shown when clicking on the *Details* icon in the *Actions* column.
  - f. *Save* your changes.
3. **Configure access control: to allow your cloud applications to access a certain backend system through HTTP, specify this system in the Cloud Connector.**
- a. Choose *Cloud To On Premise* from your *Subaccount* menu in the SAP Business Technology Platform Cockpit. Then choose *Add*.

A wizard opens to guide you through adding required values.

- b. Select *ABAP System* for **<Backend Type>** and click *Next*.
- c. Select *HTTP* for **<Protocol>** and click *Next*.
- d. Your **<Internal Host>** is *<Backend On-Premise Server Name>*. Your **<Internal Port>** is *<Backend On-Premise Port Number>*. Click *Next*.

#### Note

Find your internal host and internal port through the SAP GUI by running transaction *SMICM* and navigating to **go to > Service (ICM Monitor) - Service**.

- e. Your **<Virtual Host>** is *<Name displayed in SAP Business Technology Platform>*. Your **<Virtual Port>** is *<Port number displayed in SAP Business Technology Platform>*. Click *Next*.
  - f. Select *None* for **<Principal Type>** and click *Next*.
  - g. Select *Use Virtual Host* for **<Host in Request Header>** and click *Next*.
  - h. Enter an optional **<Description>** and click *Next*. Click *Finish* on the summary screen.
4. **Add a resource:** In addition to allowing access to a particular host and port, you also must specify which URL paths (*Resources*) are allowed to be invoked on that host.
- a. Click the **+** icon in the *Resources Accessible On...* section.
  - b. Fill the *Add Resource* dialog box fields as follows:
    - **<URL Path:>** sap/opu/odata
    - **<Active:>** Ensure box is checked
    - **<WebSocket:>** Don't check box
    - **<Access Policy:>** Path and All Sub-Paths
    - **<Description:>** Optional description
  - c. Click *Save*.

The *Status* icon is now a green square, indicating the resource is active.

5. Perform an initial Cloud Connector configuration. See [Initial Configuration - SAP Help Portal](#) for detailed information.

Mandatory fields are as follows:

- Region
  - Subaccount: SAP S/4HANA account name
  - Subaccount user: SAP BTP connection user
  - Password
6. Generate a CA certificate. See [Installation of a System Certificate for Mutual Authentication](#) for more information.
  7. Set up the trust store with your backend system.

8. Set the System Certificate.

Mandatory fields are as follows:

- Common Name
- Organizational Unit
- Organization
- Country

9. Set the Principle Propagation Subject Pattern.

10. Establish the connection between the cloud subaccount and the Cloud Connector.

11. Establish a connection to the on-premise back end system.

12. Establish a Cloud Connector connection for the on-premise system.

## Next Steps

Continue with [Setting up the SAP BTP Cloud Connector System Mapping \[page 31\]](#).

### 3.3.1 Setting up the SAP BTP Cloud Connector System Mapping

#### Prerequisites

This procedure describes additional configuration modifications after the initial [Cloud Connector installation and configuration \[page 28\]](#).

#### Context

The SAP Business Technology Platform Cloud Connector serves as the link between on-demand applications in the SAP Business Technology Platform and existing on-premise systems. This procedure addresses specific SAP Service and Asset Manager Cloud Connector configurations to make in the Cloud Connector cockpit.

#### Note

For general Cloud Connector set up and configuration, see the *SAP Business Technology Platform Cloud Connector documentation*, specifically [Configure Access Control \(HTTP\)](#).

## Procedure

1. Click the [Cloud to On-Premise](#) link, and in the [Access Control](#) tab, add your on-premise system in your Cloud to On-Premise mapping as follows:
  - **Protocol:** HTTPS
  - **Back-End Type:** ABAP
  - **Virtual Host:** Your choice
  - **Virtual Port:** Your choice
  - **Internal Host:** SAP back-end system
  - **Internal Port:** SAP back-end system
  - **Principle Type:** X.509 Certificate
2. Add a resource to your [Cloud to On-Premise](#) account:
  - **URL Path:** /sap/opu/odata
  - Click the [Path and all sub-paths](#) radio button
3. Click the [Principle Propagation](#) tab and set each of the [Trust Configurations](#) to [Trusted](#) (checked).

### Note

For Cloud Foundry subaccounts, refresh the [Trust Configuration](#) to ensure the subaccount trust configuration is inherited by the Cloud Connector. This page should be checked for refresh options any time significant changes are made to the subaccount's Trust Configuration. For more information regarding Cloud Foundry Trust Configurations, refer to [Trust and Federation with Identity Providers](#) in *SAP Business Technology Platform documentation*.

## 3.4 SAP Service and Asset manager Application Deployment

### 3.4.1 Setting Up the SAP Business Application Studio

#### Context

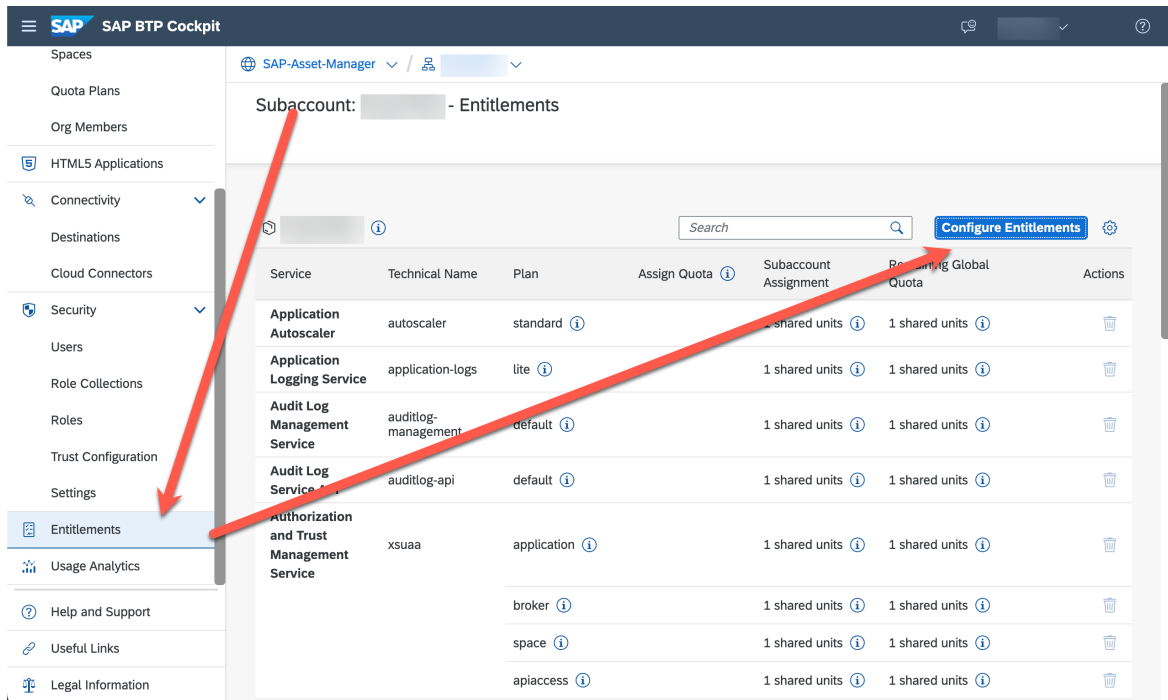
Use the SAP Business Application Studio to edit application metadata and deploy the bundle to SAP BTP services on Cloud Foundry.

### Note

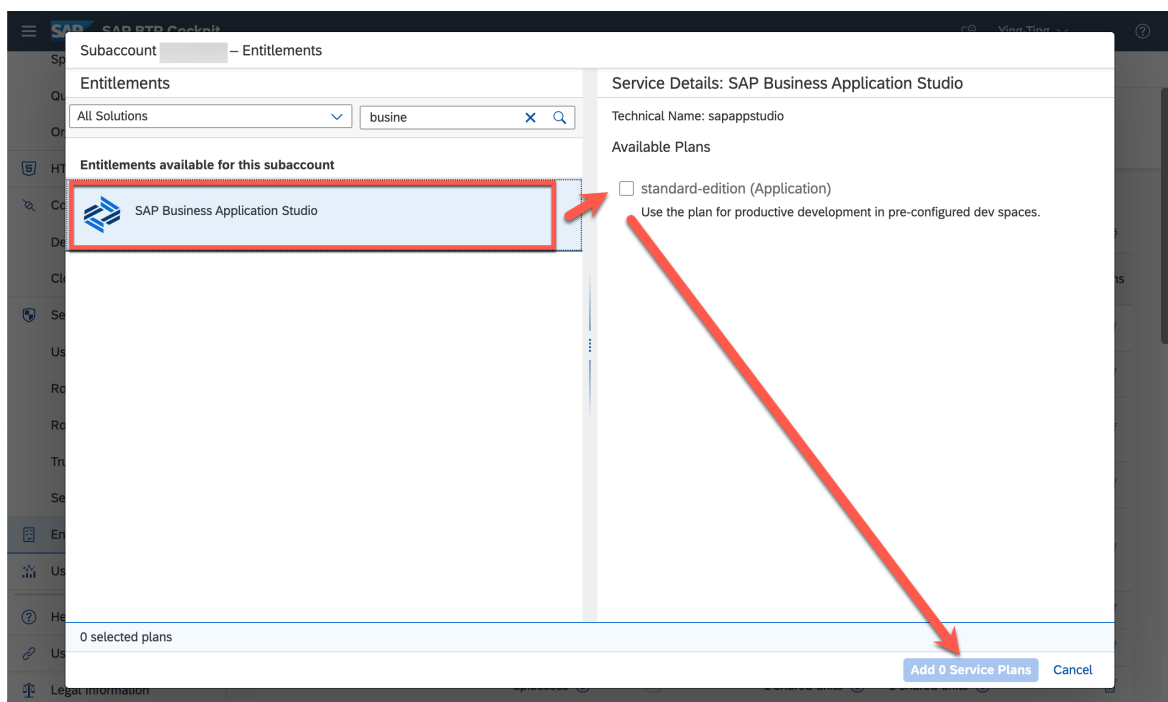
For more information, refer to the [SAP Business Application Studio](#) portal page.

## Procedure

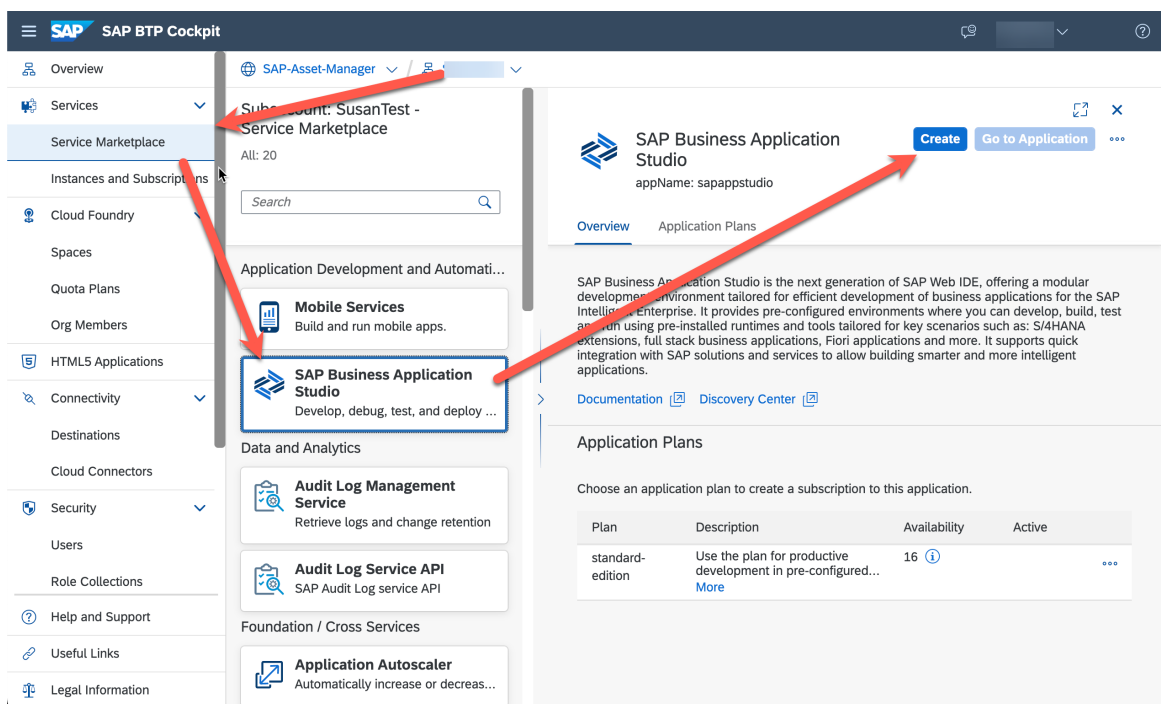
1. Navigate to the **Subaccount > Entitlements tab**.
  - a. Select **Configure Entitlements** to add the ability to subscribe to SAP Business Application Studio to the subaccount.



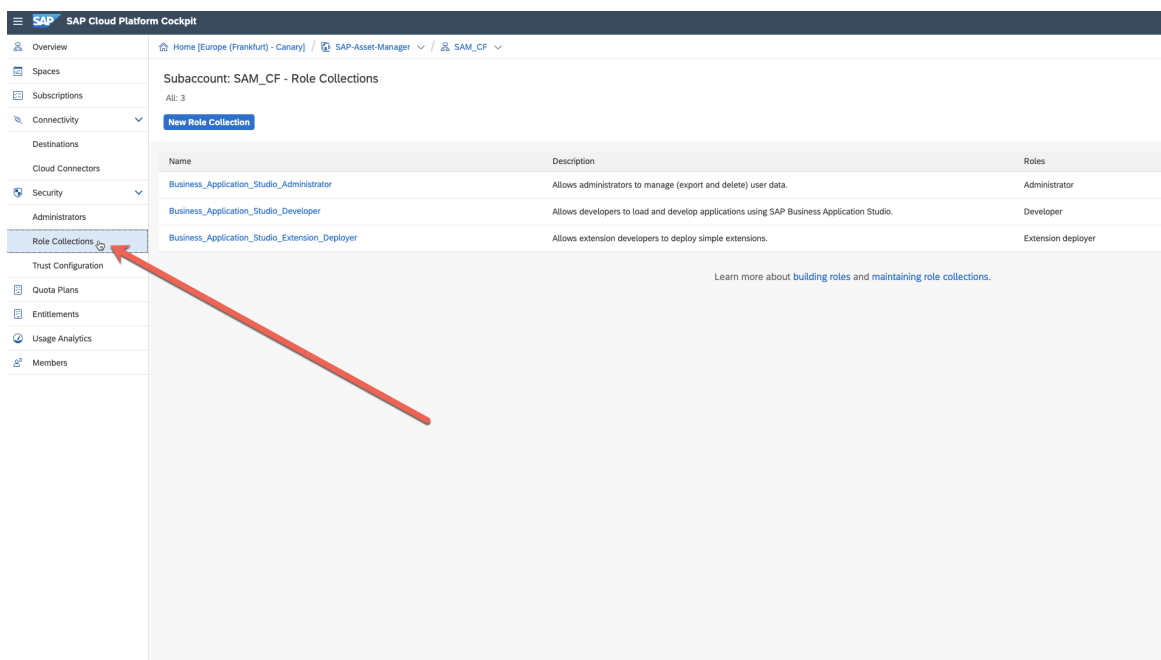
2. Search for **SAP Business Application Studio** and add it to the entitlements.



3. Save the changes to the subaccount.
4. Navigate to the [Service Marketplace](#) tab on the Cloud Foundry subaccount on which you are setting up the SAP Business Application Studio.
  - a. Create a subscription to the service.



5. Navigate to the [Role Collections](#) tab in your subaccount to ensure that the SAP Business Application Studio roles are created.



6. Select each [Name](#) in the [Role Collections](#) of the subaccount to add users to the collections.
  - a. Enter the email address you want to add to the roles.

- b. Click the + button to assign the roles from the SAP Business Application Studio.

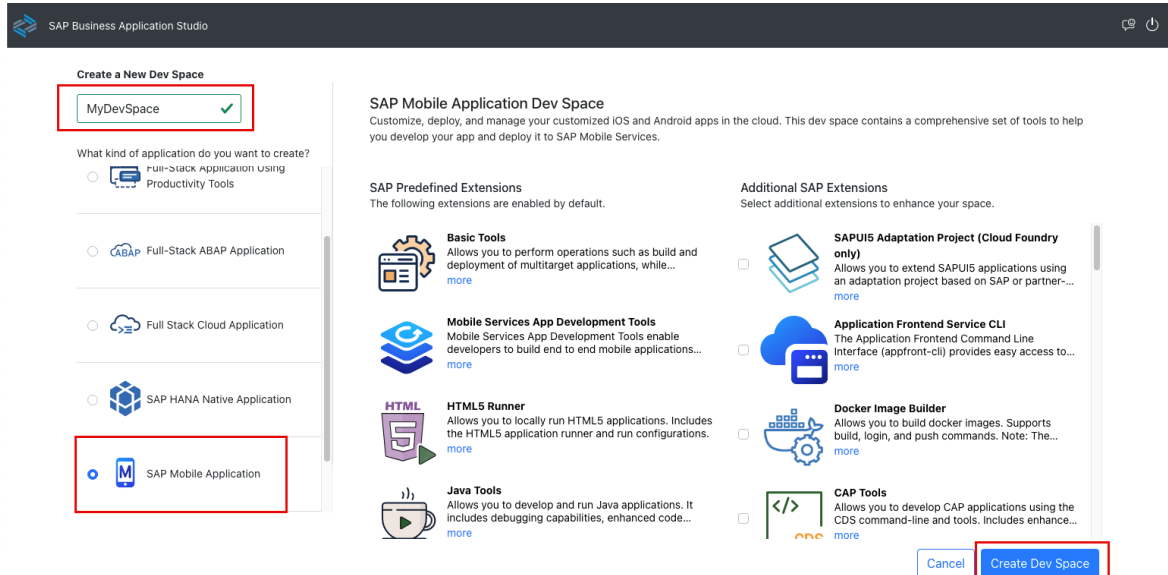
The screenshot shows the SAP BTP Cockpit interface. On the left, the 'Security' menu is expanded, and 'Role Collections' is selected. The main area displays the 'Business\_Application\_Studio\_Developer' role configuration. The 'Users (24)' section is visible, showing a list of users. A red arrow points to the '+' button in the top right corner of the 'Users (24)' section, indicating where to click to assign roles from the SAP Business Application Studio.

7. Navigate to the *Instances and Subscriptions* tab.
  - a. Click on the link for **SAP Business Application Studio**.

The screenshot shows the SAP BTP Cockpit interface. On the left, the 'Cloud Foundry' menu is expanded, and 'Instances and Subscriptions' is selected. The main area displays the 'Instances and Subscriptions' tab for the 'SAP-Asset-Manager-CF' subaccount. A list of subscriptions is shown, including 'SAP Business Application Studio'. A red arrow points to the 'SAP Business Application Studio' entry in the list.

8. To begin working, **Create the Dev Space**: A *Dev Space* is a pre-configured private environment (your own "virtual machine" on the cloud) where you can develop, build, test, and run using pre-installed runtimes and tools.
  - a. Enter a name of your choice.

- b. Select [SAP Mobile Application](#) for the type of app.
- c. Click [Create Dev Space](#).
- d. Activate whichever extensions you wish to use, and wait for your space to finish installation.



9. Once the space has finished installation, navigate into it by selecting the space name.

→ Tip

Chrome works better than Safari when attempting to access your space.

## Next Steps

Continue with [How to deploy SAP Service and Asset Manager metadata definitions to Mobile Services](#).

## 3.5 Onboarding for the SAP Service and Asset Manager Client

### 3.5.1 Obtain SAP Service and Asset Manager Onboarding URL or QR Code

#### Context

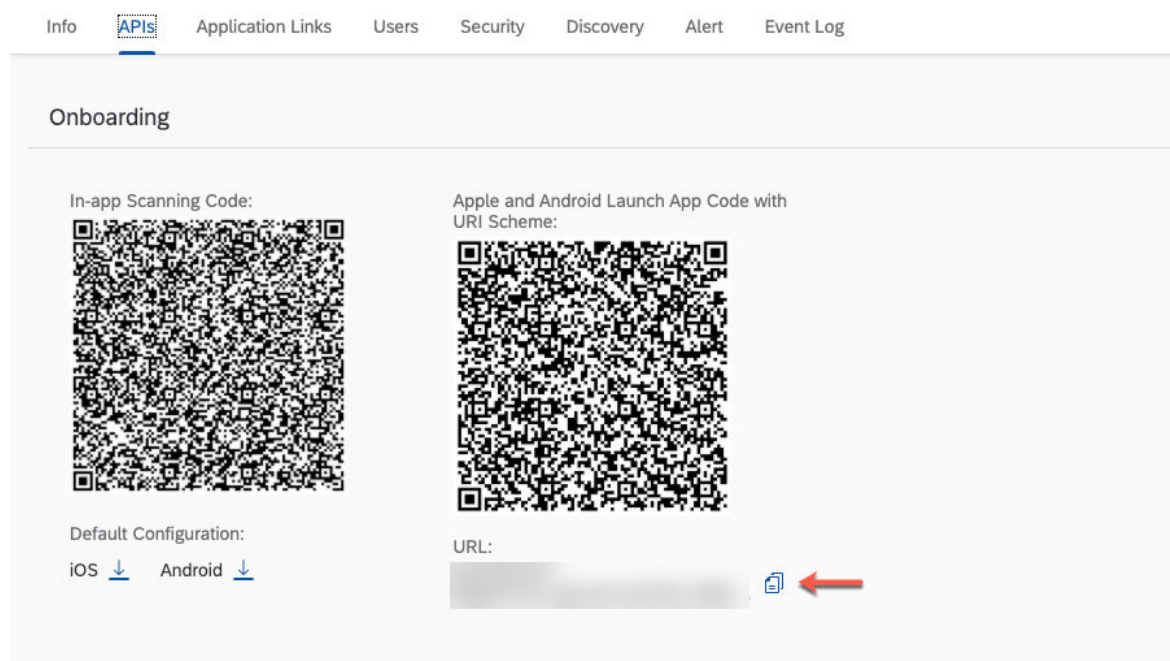
Use the following procedure to generate an onboarding QR code for the SAP Service and Asset Manager. The parameters needed for the procedure are as follows:

| Attribute Name                        | Value                  |
|---------------------------------------|------------------------|
| Apple Device Application URI Scheme   | samclient              |
| Android Device Application URI Scheme | samclient              |
| Mobile Device Application Type        | Mobile Development Kit |

## Procedure

1. Using the SAP Business Technology Platform Mobile Services Cockpit, navigate to the *sap.sam<XXXX>* application, where *<XXXX>* is the release version.
2. Select the *Application Links* tab. Find the *Device Application URI Scheme* section and click *Edit*.
3. Enter the parameters as shown in the table in this procedure.
4. Open the *<Device Application>* drop-down list and select *Mobile Development Kit*. Then click *OK*.
5. Click *OK* in the Confirm Save dialog window to confirm the save.
6. Navigate to the *APIs* tab.

The launch app QR codes are now available in the *Onboarding* section.



## Next Steps

Continue to the [Installing the SAP Service and Asset Manager Client \[page 38\]](#) procedure. When prompted, [scan the QR code using your mobile device \[page 39\]](#), or copy and paste the URL to your device browser.

## 3.5.2 Installing the SAP Service and Asset Manager Client

When you first install and start the SAP Service and Asset Manager application, a demo version is loaded, complete with demo data. Use the demo version to acclimate yourself to the app before connecting to the SAP Business Technology Platform.

### Prerequisites

- A connection to the internet is required so you can download the SAP Service and Asset Manager application.
- See [3693382](#): *Software Release Note - SAP Service and Asset Manager 2511*, for a complete list of device requirements for the SAP Service and Asset Manager application.

### Context

Download the SAP Service and Asset Manager application to your mobile device from the App Store (iOS) or SAP Software Download Center (Android). A demo version is initially loaded. When you are ready to begin working with the true application, exit the demo, log in, and begin working.

### Procedure

1. In the App Store Search box, type **SAP Service and Asset Manager** and tap *Search*.

The application description opens.

2. Tap *Free* and then tap *Install*.

The SAP Service and Asset Manager client application is downloaded from the store. After the download, an SAP Service and Asset Manager application icon appears on the mobile device.

3. Tap the icon to open the application.

### Results

The SAP Service and Asset Manager client is installed on your mobile device. See the [Initial Log In to the SAP Service and Asset Manager Application \[page 39\]](#) procedure for information on how to access the application and begin work.

#### ❗ Note

To check the version of the client software, tap the *Information* icon on the *Module* screen of the mobile device.

## 3.5.3 Initial Log In to the SAP Service and Asset Manager Application

During the initial logon process, set a numerical passcode to unlock the application without having to enter your user name and password each time the application or the mobile device is locked.

### Context

To work with your application, first log in with a corporate user name and password. Then, set a secondary personal passcode known only to you to easily unlock the application when it is locked on your device. You do not need to enter your user name and password after the initial log on, only the passcode.

Touch ID is supported on iOS and Android models with the capability and with users who choose to implement the Touch ID feature.

### Procedure

1. Tap on the app icon to open the application.

The application splash screen appears.

#### Note

You can try out the app in demo mode before using it productively with your business data. To launch the app in demo mode, tap on [Try the Demo](#), and ignore the remaining steps.

2. On the initial screen of the application, read the End-User License Agreement and click [Agree](#) to accept.
3. Scan the QR code provided to you by your administrator.

#### Note

**For Administrators:** You can generate an application QR code through the [APIs](#) tab in the SAP BTP cockpit.

4. Log in using your SAP BTP email address and password credentials.
5. Choose your device passcode. Reconfirm the passcode when prompted.

### Results

The application performs an initial transmit to bring down all of your assigned objects, such as work orders, notifications, or equipment. Depending on the size of your application, the transmit could take several minutes. When finished, the main [Overview](#) screen is shown and you are ready to begin to work with the application.

#### Note

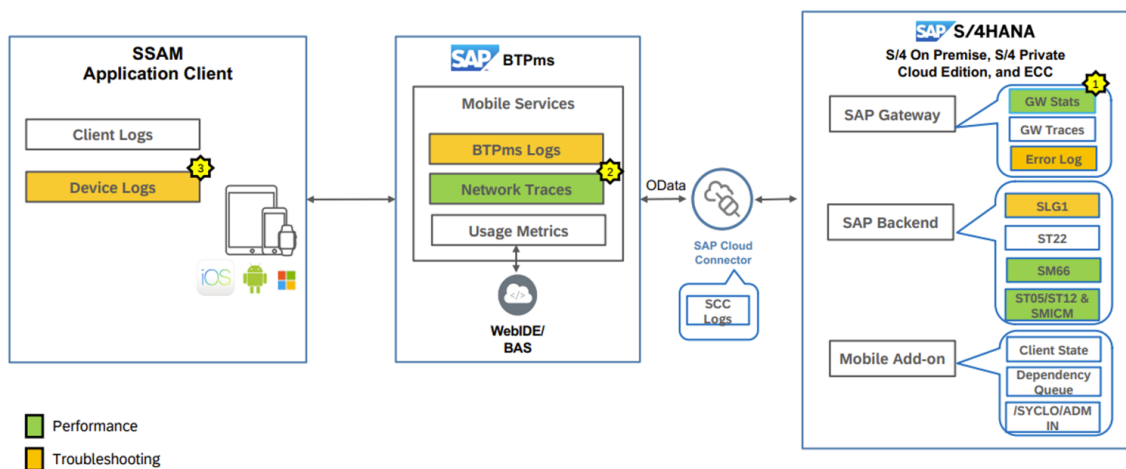
If your customer site has enabled digital registration, a pop-up wizard appears. See the [Registering Digital Signature](#) procedure for information on how to register.

## 4 Troubleshooting

The following image provides an overview of the main troubleshooting areas and procedures relevant for installing SAP Service and Asset Manager end to end.

### Performance Best Practices

#### Logs and Traces



INTERNAL – SAP and Customers Only

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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 and IWBEP):
  - [SAP Back End Performance Tracing Tools](#) [page 42]
  - [SAP Gateway Error Logs](#) [page 43]
  - [SAP Gateway Tracing Tools](#) [page 44]
  - [Internet Communications Trace](#) [page 45]
- Cloud Connector logs:
  - [Cloud Connector Log and Trace Files](#) [page 46]
- SAP Business Technology Platform Mobile Services troubleshooting:
  - [SAP Business Technology Platform Mobile Services Network Traces](#) [page 49]
  - [SAP Business Technology Platform Mobile Services Logs](#) [page 47]
- [Mobile Client and Device Logs](#) [page 51]

### Note

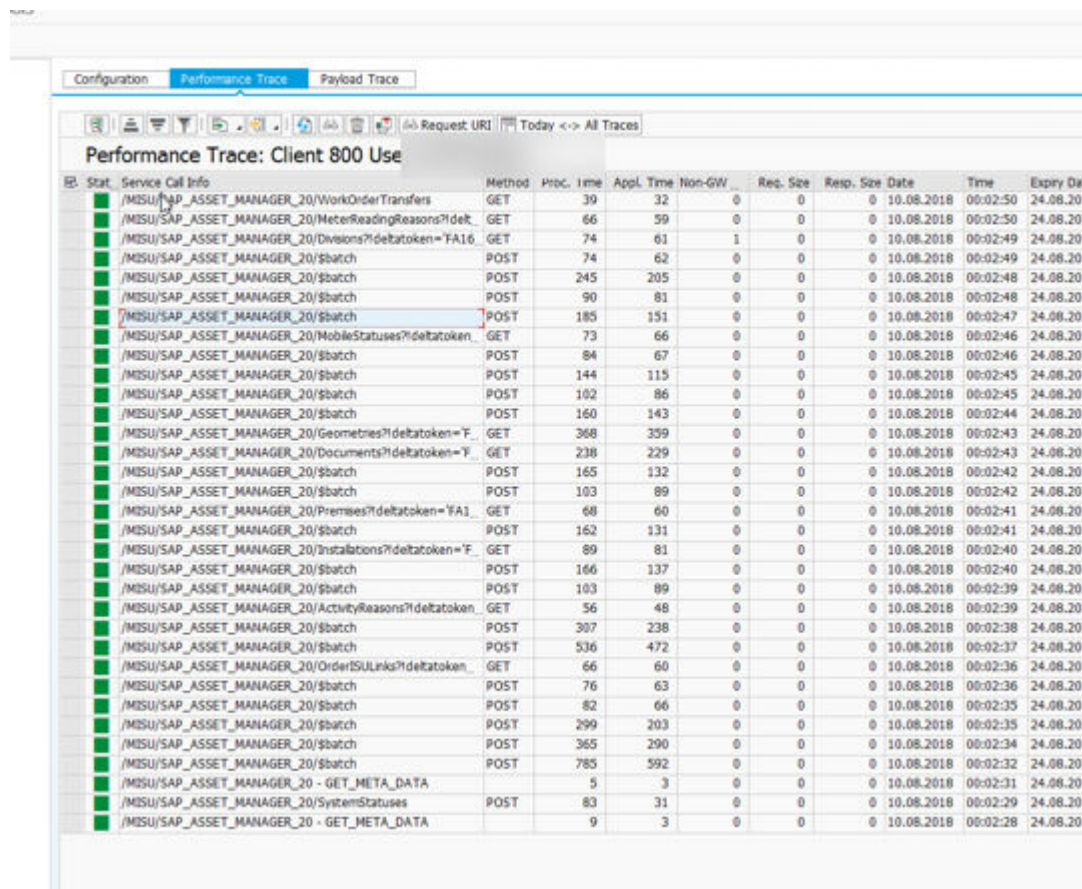
For additional troubleshooting options, refer to the [SAP Service and Asset Manager Installation Guide](#).

## 4.1 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.

### Note

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



The screenshot shows the SAP Performance Trace tool interface. The 'Performance Trace' tab is selected. The title bar indicates 'Performance Trace: Client 800 Use'. The table below lists various service calls with their performance metrics.

| Stat | Service Call Info                                      | Method | Proc. Time | Appl. Time | Non-GW | Req. Size | Resp. Size | Date       | Time     | Expiry Date |
|------|--------------------------------------------------------|--------|------------|------------|--------|-----------|------------|------------|----------|-------------|
|      | /MISU/SAP_ASSET_MANAGER_20/WorkOrderTransfers          | GET    | 39         | 32         | 0      | 0         | 0          | 10.08.2018 | 00:02:50 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/MeterReadingReasons?delta   | GET    | 66         | 59         | 0      | 0         | 0          | 10.08.2018 | 00:02:50 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/Divisions?delta&token=FA16  | GET    | 74         | 61         | 1      | 0         | 0          | 10.08.2018 | 00:02:49 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 74         | 62         | 0      | 0         | 0          | 10.08.2018 | 00:02:49 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 245        | 205        | 0      | 0         | 0          | 10.08.2018 | 00:02:48 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 90         | 81         | 0      | 0         | 0          | 10.08.2018 | 00:02:48 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 185        | 151        | 0      | 0         | 0          | 10.08.2018 | 00:02:47 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/MobileStatuses?delta&token  | GET    | 73         | 66         | 0      | 0         | 0          | 10.08.2018 | 00:02:46 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 84         | 67         | 0      | 0         | 0          | 10.08.2018 | 00:02:46 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 144        | 115        | 0      | 0         | 0          | 10.08.2018 | 00:02:45 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 102        | 86         | 0      | 0         | 0          | 10.08.2018 | 00:02:45 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 160        | 143        | 0      | 0         | 0          | 10.08.2018 | 00:02:44 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/Geometries?delta&token=F    | GET    | 368        | 359        | 0      | 0         | 0          | 10.08.2018 | 00:02:43 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/Documents?delta&token=F     | GET    | 238        | 229        | 0      | 0         | 0          | 10.08.2018 | 00:02:43 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 165        | 132        | 0      | 0         | 0          | 10.08.2018 | 00:02:42 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 103        | 89         | 0      | 0         | 0          | 10.08.2018 | 00:02:42 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/Premises?delta&token=FA1    | GET    | 68         | 60         | 0      | 0         | 0          | 10.08.2018 | 00:02:41 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 162        | 131        | 0      | 0         | 0          | 10.08.2018 | 00:02:41 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/Installations?delta&token=F | GET    | 89         | 81         | 0      | 0         | 0          | 10.08.2018 | 00:02:40 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 166        | 137        | 0      | 0         | 0          | 10.08.2018 | 00:02:40 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 103        | 89         | 0      | 0         | 0          | 10.08.2018 | 00:02:39 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/ActivityReasons?delta&token | GET    | 56         | 48         | 0      | 0         | 0          | 10.08.2018 | 00:02:39 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 307        | 238        | 0      | 0         | 0          | 10.08.2018 | 00:02:38 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 536        | 472        | 0      | 0         | 0          | 10.08.2018 | 00:02:37 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/OrderISILinks?delta&token   | GET    | 66         | 60         | 0      | 0         | 0          | 10.08.2018 | 00:02:36 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 76         | 63         | 0      | 0         | 0          | 10.08.2018 | 00:02:36 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 82         | 66         | 0      | 0         | 0          | 10.08.2018 | 00:02:35 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 299        | 203        | 0      | 0         | 0          | 10.08.2018 | 00:02:35 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 365        | 290        | 0      | 0         | 0          | 10.08.2018 | 00:02:34 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/\$batch                     | POST   | 785        | 592        | 0      | 0         | 0          | 10.08.2018 | 00:02:32 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20 - GET_META_DATA             |        | 5          | 3          | 0      | 0         | 0          | 10.08.2018 | 00:02:31 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20/SystemStatuses              | POST   | 83         | 31         | 0      | 0         | 0          | 10.08.2018 | 00:02:29 | 24.08.2018  |
|      | /MISU/SAP_ASSET_MANAGER_20 - GET_META_DATA             |        | 9          | 3          | 0      | 0         | 0          | 10.08.2018 | 00:02:28 | 24.08.2018  |

| SAP Backend Performance Trace                                                                                                 |          |                                  |                                |               |               |  |
|-------------------------------------------------------------------------------------------------------------------------------|----------|----------------------------------|--------------------------------|---------------|---------------|--|
| <div> </div> <div> <span>Error Log</span> <span>Source Code</span> <span>Request URI</span> <span>Payload Trace</span> </div> |          |                                  |                                |               |               |  |
| 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                                                                                                                             | 5        | 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             |  |

## 4.2 SAP Gateway Error Logs

Error logs provide detailed context information about errors that have occurred at runtime, enabling you to perform root cause analysis, as well as reproducing and correcting errors.

You can launch the error log with transaction `/IWFND/ERROR_LOG` in Gateway Hub systems. Launch the error log with transaction `/IWBEP/ERROR_LOG` in your back-end system.

The SAP Gateway error logs reveal basic details about errors and show errors from all users for a given client. Business logic errors are often displayed in this error log due to improper business logic. Other errors displayed include the HTTP code to indicate the type of error.

Note that based on the security level setting, advanced details or the replay function may be hidden or disabled. Note also that these error logs will not show generic authorization errors if users fail to properly authenticate.

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            | <a href="https://service.sap.com/sap/support/notes/1797736">https://service.sap.com/sap/support/notes/1797736</a> |
| ..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*.

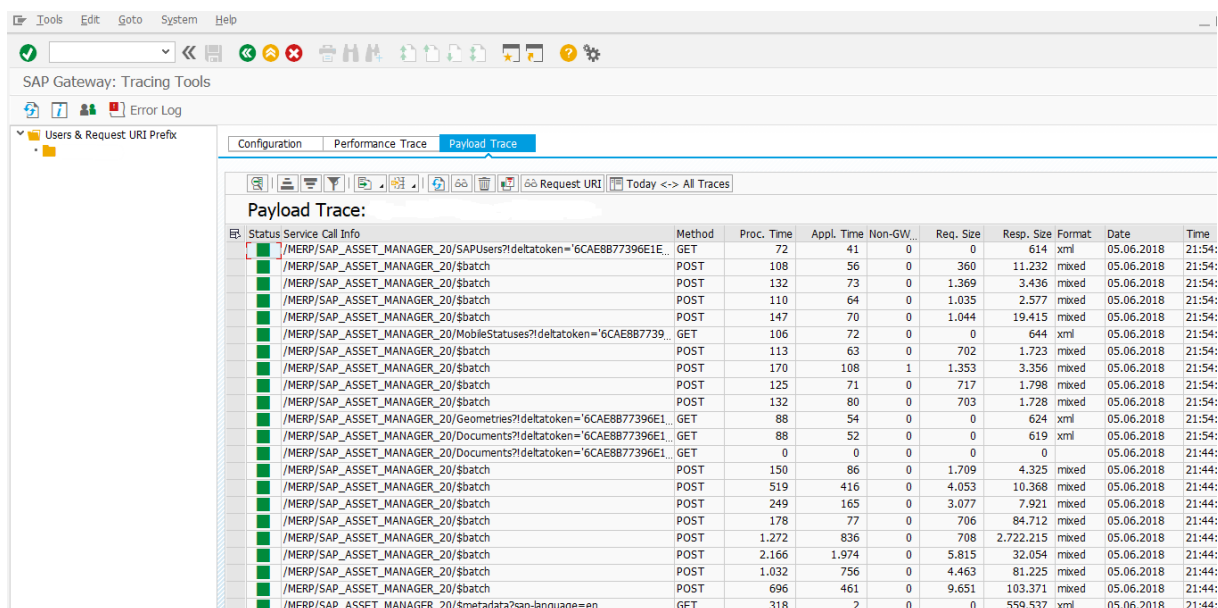
In addition, use the [Application Log Viewer](#) to display more technical error details by using transaction [/IWFND/APPS\\_LOG](#).

## 4.3 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.

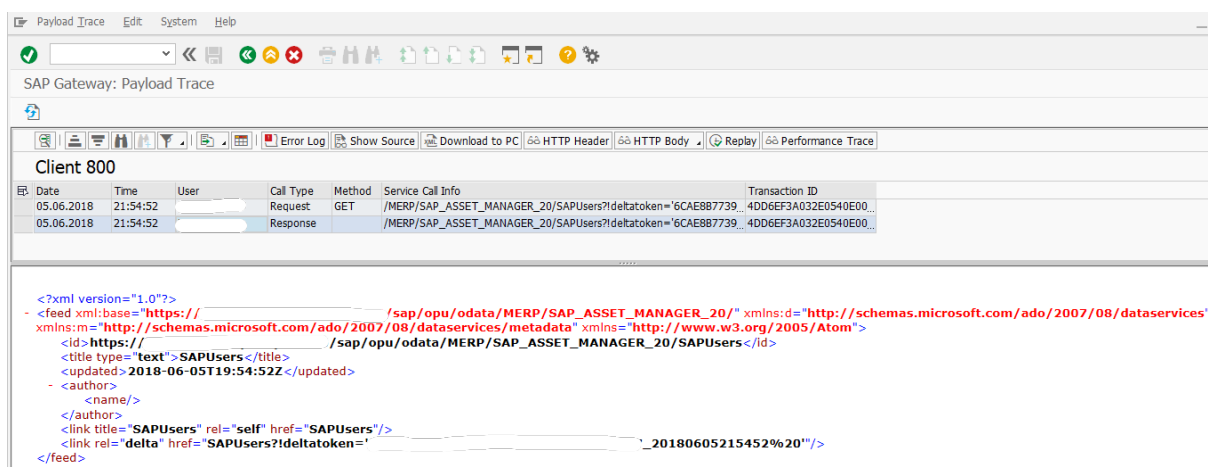
Traces display detailed request and response data coming into the SAP Gateway. Traces are active for only a short time, and are purged on a regular basis.



**Payload Trace:**

| 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.



**Client 800**

| 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='6CAE8B77396E1E...'_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*.

## 4.4 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**.

```

[Thr 140404246030080]
[Thr 140404246030080] cookie: MYSAP502=XXX; SAP_SESSIONID_SVB_800=XXX; sap-usercontext=sap-language=en&sap-client=800; BIGipServe
[Thr 140404246030080] content-length: 4744
[Thr 140404246030080] user-agent: Apache-HttpClient/4.5.1 (Java/1.7.0_161)
[Thr 140404246030080] cookie: <value skipped>
[Thr 140404246030080] x-dynatrace: FW2;634330268;5;-1273435946;198806;1;-4457717
[Thr 140404246030080] ssl_client_cert:
[Thr 140404246030080] Connection Info: role=Server, local= peer= protocol=HTTPS
[Thr 140404246030080] <<- SapSSLGetPeerInfo(ssl_hdl=7fb17177b760)==SAP_0_K
[Thr 140404246030080] out: cert_len = <no cert>
[Thr 140404246030080]
[Thr 140404246030080] Forwarded Client certificate: subject="CN= issuer="
[Thr 140404246030080] HttpBackendAgent: function call icmexec(expr=Apache-HttpClient/4.5.1 (Java/1.7.0_161)) failed with rc=1
[Thr 140404246030080] DpPlgGetVirtHost: search virt host fo
[Thr 140404246030080] DnPlgGetVirtHost: no server defined, use default

```

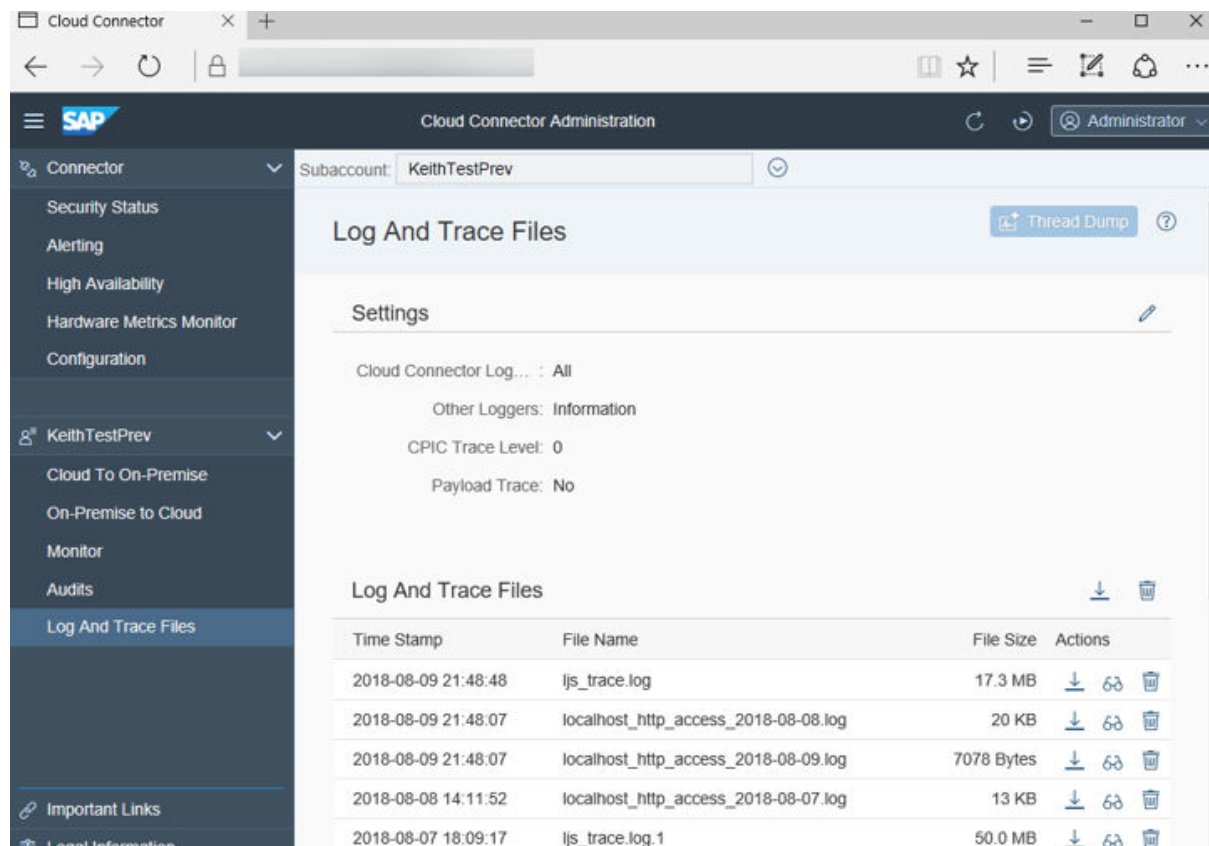
## 4.5 Cloud Connector Log and Trace Files

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:



## 4.6 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 Settings**

Log Settings  
Last purge occurred at 00 (UTC-0500)

Save Cancel Purge Now

**Component Settings**

| Component                     | Log Level | Event Logs                          |
|-------------------------------|-----------|-------------------------------------|
| Admin                         | WARN      | <input checked="" type="checkbox"/> |
| Cloud Build                   | WARN      | <input type="checkbox"/>            |
| Connectivity                  | WARN      | <input checked="" type="checkbox"/> |
| Foundation                    | WARN      | <input checked="" type="checkbox"/> |
| Hybrid Application Management | WARN      | <input checked="" type="checkbox"/> |
| Offline                       | WARN      | <input checked="" type="checkbox"/> |
| Proxy                         | WARN      | <input checked="" type="checkbox"/> |
| Push                          | WARN      | <input checked="" type="checkbox"/> |
| Registration                  | WARN      | <input checked="" type="checkbox"/> |
| SAP Mobile Cards              | WARN      | <input checked="" type="checkbox"/> |
| Security                      | WARN      | <input checked="" type="checkbox"/> |
| Statistics                    | WARN      | <input checked="" type="checkbox"/> |

**Purge Settings**

Server Error Logs:  
Keep for last 2 Weeks

Server Success Logs:  
Keep for last 1 Day

Client Error Logs:  
Keep for last 2 Weeks

Client Success Logs:  
Keep for last 1 Day

Error Trace Logs:  
Keep for last 1 Day

Success Trace Logs:  
Keep for last 1 Day

**Mobile Service for Development and Operations - Preview**

**Logs**

Event Logs Technical Logs Archived Logs

Application ID Level Correlation ID Component Type Time Frame (UTC-0500)

Search for User Name

Go Reset Filter

| Time (UTC-0500)         | Level   | Registration ID | User Name | Component  | Type            | Application ID               |
|-------------------------|---------|-----------------|-----------|------------|-----------------|------------------------------|
| 2018-08-09 14:35:36.663 | Warning | NA              |           | Foundation | NA              | NA                           |
| 2018-08-09 14:27:39.936 | Error   | NA              |           | Foundation | RequestResponse | com.sap.sam20.oauth.deeptide |
| 2018-08-09              |         |                 |           |            | RequestReason   | com.sap.sam20.o              |

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**

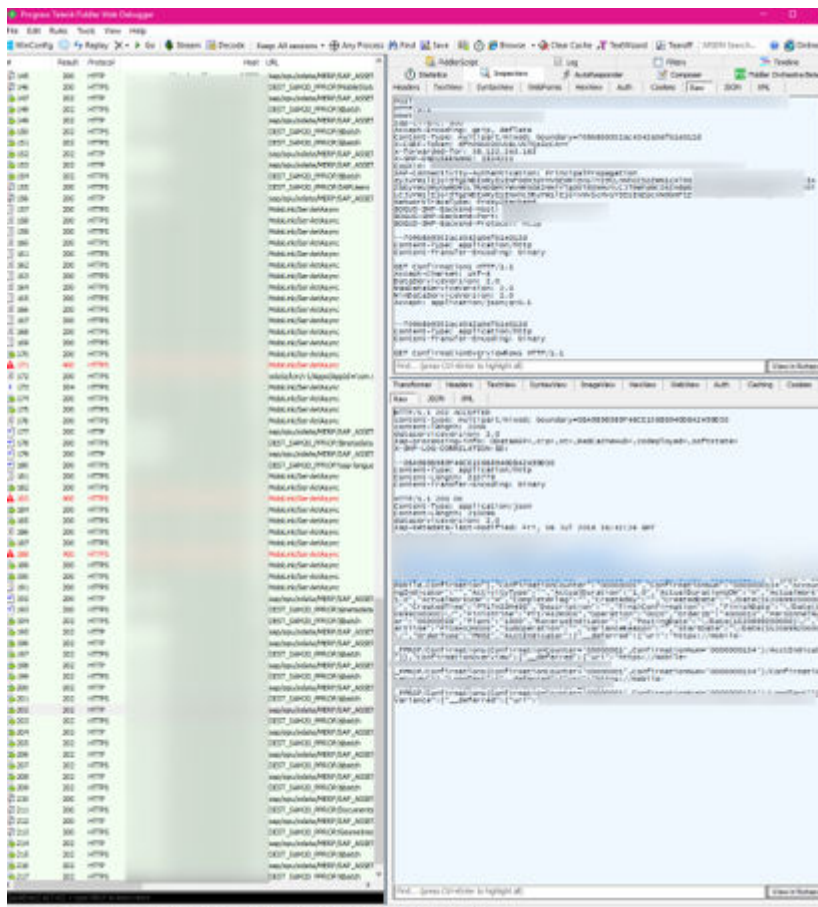
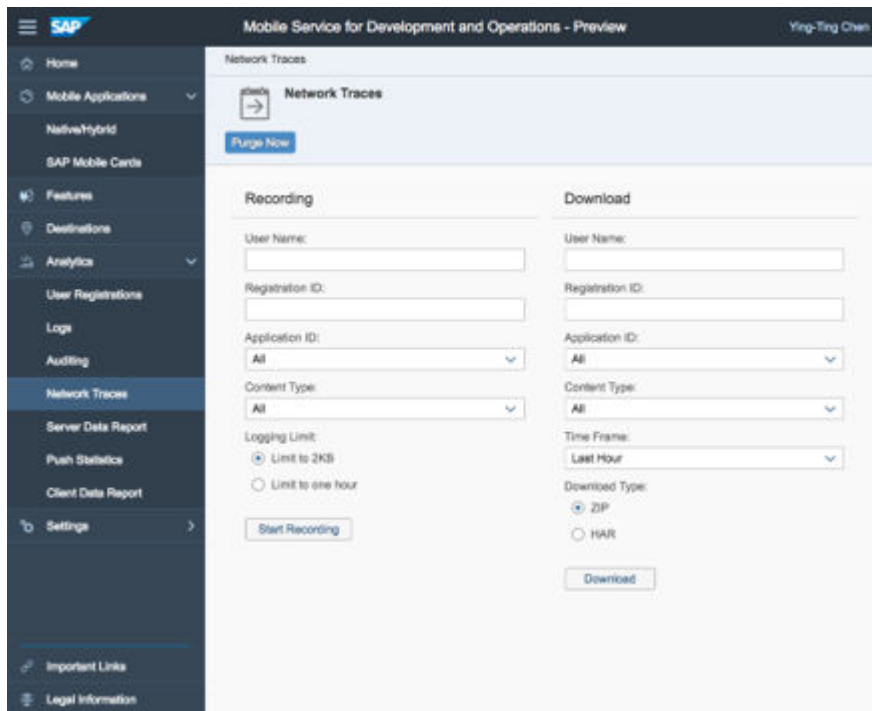
| Time (UTC-0500)         | Level       | Registration ID | Component  | Message                                                                                    |
|-------------------------|-------------|-----------------|------------|--------------------------------------------------------------------------------------------|
| 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 |

## 4.7 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.

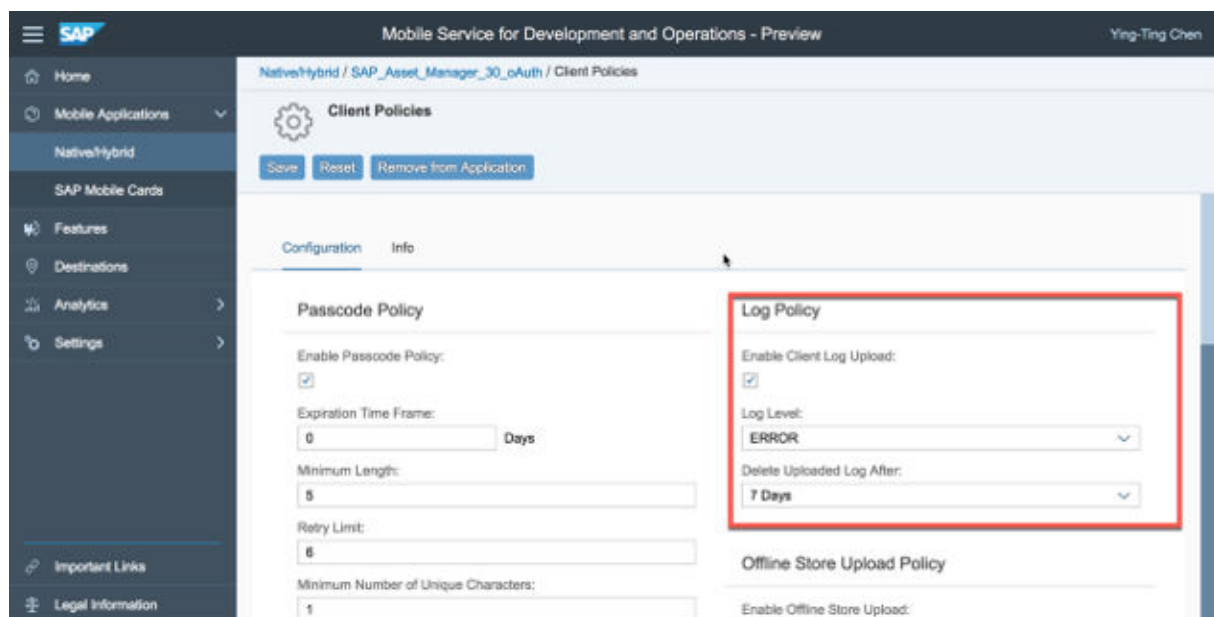
You can also set the consistency of log purging on the [Network Traces](#) screen.



## 4.8 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.



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