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Prepackaged Integration with SAP Field Service Management

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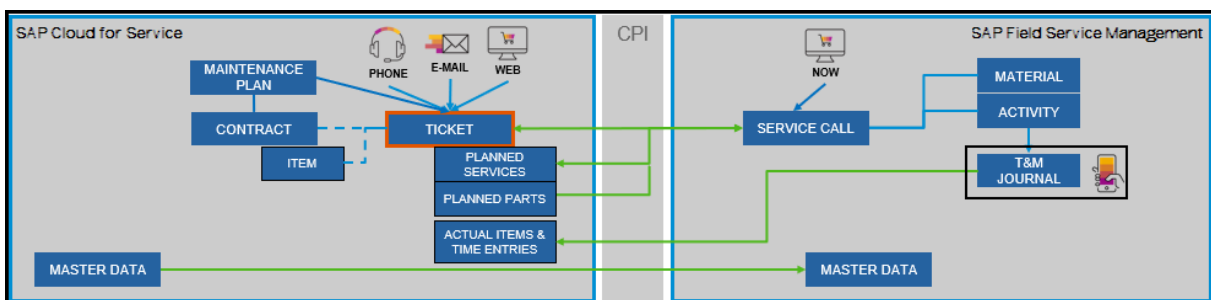
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1 Overview

Integrating SAP Cloud for Service with SAP Field Service Management (FSM) enables to achieve the end to end service process.

While the omnichannel support and initial ticket planning are done in SAP Cloud for Service, the scheduling and field service execution on the mobile device are handled in SAP Field Service Management. The updates flow from one system to the other based on the defined scope.

The following image depicts the process flow of this integration:



2 Configure SAP Field Service Management

Learn about the configurations to be performed on the SAP Field Service Management system to enable integration with SAP Cloud for Service.

In addition to these configurations, you must define rules to create the SAP Field Service Management item group data as present in SAP Cloud for Service. For more information, see [Define Rules for Product and Item Processing Type \[page 20\]](#).

2.1 Configure Account and Company

As an administrator, set up account and company in the SAP Field Service Management system. The account and company that you configure here are used for the integration with SAP Cloud for Customer.

Set up an Account

Provision an SAP Field Service Management tenant. For more information, see <https://docs.coresystems.net/>. After you provision a tenant in the SAP Field Service Management system, you get an FSM account, a password, and a **SUPERUSER** role with a password.

Set up a Company

To create a company in the SAP Field Service Management system, follow these steps:

i Note

When you log on to the system as an administrator, make sure that the [Sign in with User](#) option is enabled.

1. Navigate to [Companies](#) and click [Create](#).
2. On the [Create Company](#) window, enter the required details. Make sure, you select **Standalone** for [Type](#).
3. Click [Save](#).

2.2 Create the OAuth Client

As an administrator, create an OAuth client so that it can be deployed in the SAP Cloud Platform Integration system.

To create the OAuth client, follow these steps:

1. Navigate to *Clients* and click *Create*.
2. In the *Create Client* window, enter the required details. Make sure that you select *CLIENT_SECRET* for *Client Authentication Method*.
3. In the *User Groups* section, select *Admin*. This assigns user group to the company that you have created for this integration.
4. Click *Save*.

2.3 Configure Business Rules for T&M Approval

As an administrator, select the business rules that must be enabled to approve T&M journal.

The business rules to be enabled are as follows:

- SAMPLE - Newly created Efforts require approval to be synchronized to the ERP
- SAMPLE - Newly created Expenses require approval to be synchronized to the ERP
- SAMPLE - Newly created Material require approval to be synchronized to the ERP
- SAMPLE - Newly created Mileage require approval to be synchronized to the ERP
- SAMPLE - Update responsible person of all checklists linked to an activity when releasing the activity to technician

2.4 Configure the FSM Connector

As an administrator, configure the FSM connector in the SAP Field Service Management system.

To configure the FSM connector, follow these steps:

1. On the *Accounts* page, in the *Roles* field, add *STREAMING*.
2. Go to ► *Company* ► *Settings* ► For the company settings, set **CoreSystems.FSM.Connector.Enabled** to **true**.
3. Go to ► *Company* ► *Messages* ► *FSM Connector* ►, and set up the endpoint where you want to send the notifications. The details are as follows:

Field	Description
URL	Enter the SAP Field Service Management to SAP Cloud for Service Ticket iflow endpoint. For example, https://c****-iflmap.hcisb.int.sap.eu2.hana.ondemand.com/http/FSM/C4C/Ticket
Auth method	Basic
Auth user	A CPI user who has ESBMessaging.send role
Auth password	The password of the auth user.
Integration Type	C4C

4. Click [Save](#).

3 Configure SAP Cloud for Service

As an administrator, configure SAP Cloud for Service so that it can send notifications to the iFlows of SAP Cloud Platform Integration.

3.1 Enable Integration

As an administrator, enable the feature in SAP Cloud for Service.

Go to ► [Business Configuration](#) ► [Implementation Projects](#) ► [Your Project](#) ► [Edit Project Scope](#) ► [Questions](#) ►. Expand ► [Communication and Information Exchange](#) ► [Integration with External Applications and Solutions](#) ►, and then select [Integration with SAP Field Service Management](#). Click *Finish*.

3.2 Create a Communication System

A communication system represents an external system for communication. A communication system is also the reference for the ID mapping maintained in your cloud solution.

Prerequisites

Do the following:

1. From KeyStore, download the SAP Cloud Platform Integration (CPI) root certificates.
 1. Log on to the CPI system.
 2. Go to ► [Operation View](#) ► [KeyStore](#) ► [Current](#) ►, and download the following certificates:
 - [sap_baltimore cybertrust root](#)
 - [sap_verisign class 3 public primary certification authority - g5](#)
2. Import the CPI root certificates to the SAP Cloud for Service trust center.
 1. Log on to the SAP Cloud for Service system as an administrator.
 2. Go to ► [Administrator](#) ► [Common Tasks](#) ► [Edit Certificate Trust List](#) ► [Upload](#) ►, and upload the CPI root certificates.

Procedure

To enable integration with SAP Field Service Management, you must create a new communication system (and not use an existing one).

To create a communication system in SAP Cloud for Service, follow these steps:

1. Log on to SAP Cloud for Service as an administrator.
2. From the *Administrator* work center, select *Communication Systems*.
3. Click *New*.
4. On the *New Communication System* screen, in the *Basic Information* section, enter the following details:

Field	Description
ID	ID or name of the system to be connected.
Host Name	The CPI tenant link.
System Access Type	Internet

i Note

In *System Instances*, the *System Instance ID* must be the same as the company ID created in the SAP Field Service Management.

5. Click *Save and Close*.
6. On the newly created communication system, click *Actions*, and set the system to *Active*.

3.3 Configure Communication Arrangements

To enable the integration between an on-premise system and the cloud solution, you must configure and activate the communication arrangements. You can create communication arrangements in bulk by entering common information at one go.

To configure communication arrangements, follow these steps:

1. Log on as an administrator, and go to **Administrator** > *General Settings* > *Communication Arrangement* > *New*.
2. On the *New Communication Arrangement* screen, in the *Communication Scenarios* section, select *Ticket Integration with SAP Field Service Management*, and then click *Next*.
3. On the *Define Business Data* tab, in the *Communication System* section, enter the following details, and click *Next*:

Field	Description
System Instance ID	Enter <i>FSM</i> .
Code List Mapping	Select <i>Tickets Integration</i> .

4. On the *Define Technical Data* tab, enter the required information for outbound communication, and click *Next*.
5. Review the settings and click *Finish* to confirm.
6. Select the newly-added communication arrangement and click *Edit*.
7. In the *Communication Credentials* step, provide the inbound and outbound credentials.
 - If you use inbound communication, select the *Authentication Method* in the *Inbound Communication Credentials* section. In the *User ID* field, click *Edit Credentials*.
Based on the selected authentication method, you must define the credentials of the communication user as described in the following table:

i Note

The user ID of the communication user is created automatically.

Authentication Method	Settings
SSL Client Certificate	<p>If you use this authentication method, do one of the following:</p> <ul style="list-style-type: none"> ○ Upload the public key certificate that has been provided by your communication partner as part of provisioning. You can also receive it on creating an incident in the component for your respective SAP Middleware (LOD-HCI/ LOD-PI). ○ If the communication partner cannot provide a certificate, then create a PKCS#12 key pair file, which is password encrypted and contains a public key certificate and a private key, and provide the credentials to your communication partner. To upload a PKCS#12 file, follow these steps: <ol style="list-style-type: none"> 1. Click <i>Certificate</i> and select the relevant <i>Upload Certificate</i>. 2. Click <i>Ok</i>. <p>To create a PKCS#12 key pair file, follow these steps:</p> <ol style="list-style-type: none"> 1. Click <i>Certificate</i> and select <i>Create and Download Key Pair</i>. 2. Enter a name for the PKCS#12 file and save it. 3. Define a password for the PKCS#12 file and click <i>OK</i>. The details of the certificate are displayed. 4. Click <i>OK</i>.

Authentication Method	Settings
User ID and Password	<p>If you use this authentication method, you must define a password as follows:</p> <ol style="list-style-type: none"> 1. Select <i>Change Password</i>. 2. Enter a password. <div style="border: 1px solid #ccc; background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p>i Note</p> <p>You need the user ID and password while configuring the receiver communication channel in SAP Middleware.</p> </div> <ol style="list-style-type: none"> 3. Click <i>OK</i>.

- If you use outbound communication, select the *Authentication Method* in the *Outbound Communication Credentials* section. Based on the selected authentication method, you must define the credentials of the communication user as described in the following table:

Authentication Method	Settings
SSL Client Certificate	SAP System Key Pair (recommended)
User ID and Password	Trusted Third-Party Key Pair

8. In the *Technical Data* tab, do the following:
- Click *Edit Advanced Settings*. For each of the communication scenarios, check the details on the *Outbound* tab and maintain the *Path* field. The following table describes the path required for each service:

Service	Path
Replicate Registered Products to SAP Field Service Management	/cxf/C4C/FSM/Equipment
Replicate Business Partner to SAP Field Service Management	/cxf/C4C/FSM/BusinessPartner
Replicate Business Partner relationships to SAP Field Service Management	/cxf/C4C/FSM/Contact
Replicate Employee to SAP Field Service Management	/cxf/C4C/FSM/Employee
Replicate Materials to SAP Field Service Management	/cxf/C4C/FSM/Material
Replicate Service Request to SAP Field Service Management	/cxf/C4C/FSM/ServiceRequest
Replicate Service Request Confirmation to SAP Field Service Management	/cxf/C4C/FSM/TicketConf

i Note

The inbound services added as part of the SAP Field Service Management communication scenario are as follows:

- Replicate Service Request From SAP Field Service Management
 - Service Request Replication Confirmation From SAP Field Service Management
-
- Click *Save and Reactivate*.

4 Configure SAP Cloud Platform Integration

Configure the iFlow in SAP Cloud Platform Integration (CPI) to replicate master data and tickets between SAP Cloud for Service and FSM.

Prerequisites

- Import certificate to the CPI KeyStore.
Go to [Operations View](#) > [KeyStore](#) > [Add](#) and click [Certificate](#).
- Add SAP Cloud for Service Client Certificate to each iFlow from SAP Cloud for Service to FSM.

i Note

Repeat the steps for each iFlow.

1. In CPI , go to [Design](#) > [SAP Cloud for Customer Integration with SAP Field Service Management](#).
2. Select an iFlow from SAP Cloud for Service to FSM and click [SOAP](#) > [Edit](#) > [Connection](#).
3. In the [Client Certificate Authorization](#) section, click [Add](#).
4. Click [Select](#) against the row in which you want to add the certificate, browse and add the SAP Cloud for Service Client Certificate
5. Click [Save](#).
6. Click [Deploy](#).

i Note

To come out of the edit mode, click [Cancel](#).

- Deploy the OAuth2 credentials of FSM.
In CPI , click [Operations View](#) > [Security Material](#) > [Add](#) > [OAuth2 Credentials](#) and enter details as shown in the following table:

Field	Description
Name	Enter a name. For example, FSM_INT_CLIENT_CREDENTIALS .
Grant Type	Select Client Credentials .
Description	Enter a description.
Authentication URL	Enter https://auth.coresuite.com/api/oauth2/v1/token
Client ID	Enter the client ID that is created in SAP Field Service Management.

Field	Description
Client Secret	Enter the client secret as generated in SAP Field Service Management.
Client Authentication	Select <i>Send as Request Header</i> .
Include Scope	Select this checkbox to include scope.
Scope	Enter <i>General</i> .
Content Type	Select <i>application/x-www-form-urlencoded</i> .

- Deploy the SAP Cloud for Service user credentials for SAP Cloud for Service OData access for business partner relationship.
In CPI , click ► [Operations View](#) ► [Security Material](#) ► [Add](#) ► [User Credentials](#) ►.
- Deploy the user credentials of SAP Cloud for Service communication system, configured for the inbound communication (if user credentials is used as authentication).
In CPI , click ► [Operations View](#) ► [Security Material](#) ► [Add](#) ► [User Credentials](#) ►.


4.1 Configure the iFlow Parameters

Configure the iFlow parameters for the SAP Cloud for Service integration.


Replicate Contact Person Relationship from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM host name	Enter the host URL. For example, https://de.coresuite.com ► .
FSM account name	Enter the FSM account name.
Company	Enter the company name.
Client Identifier	Enter the Client ID.
Credential name	Enter the OAuth2 credential of FSM that you deployed.


Replicate Employee from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM host name	Enter the host URL. For example, https://de.coresuite.com 
FSM account name	Enter the FSM account name.
Company	Enter the company name.
Client Identifier	Enter the Client ID.
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Replicate Registered Product from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM host name	Enter the host URL. For example, https://de.coresuite.com 
FSM account name	Enter the FSM account name.
Company	Enter the company name.
Client Identifier	Enter the Client ID.
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Replicate Product from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM host name	Enter the host URL. For example, https://de.coresuite.com 
FSM account name	Enter the FSM account name.

Parameter	Description
Company	Enter the company name.
Client Identifier	Enter the Client ID.
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Replicate Business Partner from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM host name	Enter the host URL. For example, https://de.coresuite.com .
FSM account name	Enter the FSM account name.
Company	Enter the company name.
Client Identifier	Enter the Client ID.
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Parameter	Description
C4C host url	Enter the SAP Cloud for Service host URL. For example https://\$\$\$\$\$.dev.sapbydesign.com .
Credential name	Enter the user credential that you deployed for SAP Cloud for Service OData access.

Replicate Ticket from SAP Cloud for Service to SAP FSM

Parameter	Description
Receiver	Select <i>FSM</i>
FSM Ticket connector host name	Enter host URL. For example, https://et.coresystems.net .
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Parameter	Description
Receiver	Select <i>C4C_Conf</i> .
C4C host url	Enter the SAP Cloud for Service host URL. For example, https://\$\$\$\$\$.dev.sapbydesign.com .
Authentication	Select Basic or Client Certificate.
Credential Name (for Basic)	Enter the user credential name deployed in CPI that is configured in the inbound setting of communication arrangement in SAP Cloud for Service.
Private key alias	Enter the deployed private key alias of the client certificate in SAP Cloud for Service.

Parameter	Description
Tab	Select <i>More</i> .
Client Identifier	Enter the client ID.
Company	Enter the company name.
FSM account name	Enter the FSM account name.
FSM host URL	Enter the host URL. For example, https://de.coresuite.com .
FSM_Default_Warehouse_Code	Enter the code value of the default ware house created in FSM.

Confirm Ticket Replication from SAP Cloud for Service

Parameter	Description
Receiver	Select <i>FSM</i>
FSM Ticket connector host name	Enter host URL. For example, https://et.coresystems.net .
Credential name	Enter the OAuth2 credential of FSM that you deployed.

Parameter	Description
Tab	Select <i>More</i> .
Client Identifier	Enter the client ID.

Parameter	Description
Company	Enter the company name.
FSM account name	Enter the FSM account name.

Replicate Ticket from SAP FSM to SAP C4C

Parameter	Description
Receiver	Select <i>C4C</i>
FSM Ticket connector host name	Enter the SAP Cloud for Service host URL. For example, https://\$\$\$\$\$.dev.sapbydesign.com .
Authentication	Select Basic or Client Certificate.
Credential Name (for Basic)	Enter the user credential name deployed in CPI that is configured in the inbound setting of communication arrangement in SAP Cloud for Service.
Private key alias	Enter the deployed private key alias of the client certificate in SAP Cloud for Service.

Parameter	Description
Tab	Select <i>More</i> .
C4C short tenant ID	Enter the SAP Cloud for Service short tenant ID that is entered in the <i>My system</i> field of communication arrangement,.

5 Additional Configuration for SAP Field Service Management

Learn more about the additional configurations to be done for SAP Field Service Management.

5.1 Create a Default Warehouse

As an administrator, create a warehouse to allow each technician access rights to it.

To create a default warehouse, follow these steps:

1. Log on to the master data. (<https://apps.coresystems.net/master-data-management/#/login/>)
2. Navigate to *Items* and on the *Items Settings* page, in the *Warehouses* section, click the add icon.
3. In the *Warehouse* window, enter the required details. Make sure that you select *W000* for *Code*. The *Warehouse owner* field must be left blank so that each technician can access the warehouse.
4. Click *Save*.

5.2 Maintain Country And Region

To make sure that the country and region code values of SAP Field Service Management and SAP Cloud for Service are the same, download the code list from SAP Cloud for Service and upload them on SAP Field Service Management via **POSTMAN** using **Country** and **State DTO**.

6 Additional Configurations for SAP Cloud for Service

Learn more about the additional configurations to be done for SAP Cloud for Service.

6.1 Maintain Code List Mapping

As an administrator, maintain code list mapping in the [Code List Mapping for Integration with External Applications and Solutions](#) activity.

Maintain code list mapping for the following:

- SAP Cloud for Service ticket type – SAP Field Service Management service call type
- SAP Cloud for Service ticket priority – SAP Field Service Management service call priority
- SAP Cloud for Service ticket user status – SAP Field Service Management service call status
- SAP Cloud for Service Time type and SAP Field Service Management Effort type

Example Mappings

For the mapping of ticket type and service call type, select [BusinessTransactionDocumentProcessingTypeCode - Processing Type Code](#) and maintain the required values, such as:

Code	Description	External Code
ZCOA	Complaint	-5
ZWF2	Field Service (Z)	-6
SRVO	Service Order	-4
SRRQ	Service Request	-1

For the mapping of ticket user status and service call status, select [ServiceRequestUserLifeCycleStatusCode - User Status](#) and maintain the required values, such as:

Code	Description	External Code
5	Completed	-1
2	In Process - Agent Working on it	-2
1	Open	-5

6.2 Maintain ID Mapping

As an administrator, maintain the mapping for *FSM Problem Type*.

To maintain the ID mapping, go to ► [Administrator](#) ► [ID Mapping for Integration](#) ►, and in the *Mapping of field*, select *FSM Problem Type*.

6.3 Define Rules for Product and Item Processing Type

As an administrator, define the rules for product and item processing type.

Set FSM Relevance for Item Processing Codes

Maintain FSM relevance in the existing configuration for item processing code using the fine-tuning activity. The ticket items must have FSM relevance set for their item processing type so that they are replicated.

Navigate to ► [Business Configuration](#) ► [Implementation Projects](#) ► [Your Project](#) ► [Open Activity List](#) ► [Fine-Tune](#) ► [Maintain Item Processing Codes](#) ►, and for the required processing types, set the *FSM Relevance* column to one of the following:

- Activity
- Reserved Material

This setting is used to replicate ticket items from SAP Cloud for Service to SAP Field Service Management.

Define Rules for Creating Items in Tickets for Entities Sent from SAP Field Service Management

For creating items in tickets for the T&M journal entities sent from SAP Field Service Management, you must define rules to determine products and processing type. Navigate to ► [Administrator](#) ► [Service and Social](#) ► [Field Service Management](#) ► [Define Rules for Product and Item Processing Type](#) ►. In the *Define Rules for Product and Item Processing Type* page that appears, click *Add Row* and enter details in the following columns:

- *FSM Relevance* - The available values are:
 - Activity
 - Material
 - Mileage
- Product
- Ticket Type
- Service Org

- Product (output)
- Processing Code (output)

6.4 Create Workflow Rules to Replicate Tickets

As an administrator, create workflow rules to automate the *Release to FSM* action for a ticket.

To create a workflow rule, follow these steps:

1. Navigate to ► *Administrator* ► *Workflow Rules* ► *New* 📄.
2. On the *New Rule* page, in the *Enter Basic Data* tab, do the following:
 - Add a description
 - Select *Ticket* as the business object
3. In the *Define Conditions* tab, define the rule conditions.
4. In the *Define Actions* tab, do the following:
 - In the *Rule Type* field, enter *Action*.
 - In the *Select Action* field, enter *Release to FSM*.
5. Review and confirm the rule.

7 Replicate Master Data

For successful integration, you must first replicate the master data.

You can replicate the following master data from SAP Cloud for Service to SAP Field Service Management:

- Customer and Contact
- Product
- Registered Product
- Employee

After the integration with SAP Field Service Management is scoped in, replication of master data is real-time. For example, if any new instance is created or an existing one is updated, it is replicated to SAP Field Service Management.

7.1 Customer to Business Partner

Customers from SAP Cloud for Service are replicated as Business Partners in SAP Field Service Management.

The mapping is as follows:

SAP Cloud for Service (Customer)	SAP Field Service Management (Business Partner)
ID	External ID
Name	Name
Status = Active	Active
Address	Address
Main Contact	Default Contact
Notes	Notes (Remarks)
Phone	Phone 1
Mobile	Mobile
E-mail	Email
Website	Website

For all the replicated *Customer* entities in SAP Cloud for Service (Customer, Individual Customers, Prospect), the mapping of *Address* is as follows:

SAP Cloud for Service	SAP Field Service Management
	Address Type
Ship-to	Ship to

SAP Cloud for Service	SAP Field Service Management
Bill-to	Bill to
Ship-to and bill-to indicator set to <i>No</i>	<i>Other</i>
Main indicator	Default indicator

All statuses other than *Active* from SAP Cloud for Service are set to *Not Active* in SAP Field Service Management.

7.2 Contact to Contact

Contacts from SAP Cloud for Service are replicated as Contacts in SAP Field Service Management.

The field mapping for Contacts is as follows:

SAP Cloud for Service (Customer)	SAP Field Service Management (Business Partner)
ID	External ID
First Name/ Last Name	First Name/ Last Name
Additional Name	Additional Name
Status = Active	Active
Account	Business Partner
Main Contact (from account)	Default Contact
Phone	Office phone
Mobile	Mobile phone
E-mail	Email
Fax	Fax
Gender	Gender
Title	Title

In SAP Cloud for Service, one contact can be linked with multiple accounts and can also be marked as the *Main* contact for these accounts. However, in SAP Field Service Management, this is not supported. In SAP Field Service Management, the contact that is linked to multiple accounts in SAP Cloud for Service, is duplicated for each account with the corresponding business partner relationship information.

All statuses other than *Active* from SAP Cloud for Service are set to *Not Active* in SAP Field Service Management.

7.3 Product to Item

Products in SAP Cloud for Service are replicated to Items in SAP Field Service Management.

The field mapping for Product is as follows:

SAP Cloud for Service (Product)	SAP Field Service Management (Item)
Product ID	External ID
Name	Name
Base UoM	UoM
Status = Active	Active
Notes	Notes (Remarks)

All statuses other than *Active* from SAP Cloud for Service are set to *Not Active* in SAP Field Service Management.

i Note

Product Category in SAP Cloud for Service can be manually mapped to Item group in SAP Field Service Management. In SAP Field Service Management, the item groups (as product category in SAP Cloud for Service) can be maintained manually. The category information is also replicated for the replicated products.

7.4 Registered Product to Equipment

Registered Products from SAP Cloud for Service are replicated as Equipment in SAP Field Service Management.

The registered product hierarchy information is also replicated. Before replicating the registered products, make sure that the customer, contact, and product data is replicated. The mapping is as follows:

SAP Cloud for Service (Registered Product)	SAP Field Service Management (Equipment)
ID	External ID
Description	Name
Serial ID	Serial No.
Product	Item
Status	Status (Active Indicator)
Belongs to Installation Point ID	Parent
Product Location	Location
Customer (Contact)	Business Partner (Contact)

7.5 Employee to People

Employees from SAP Cloud for Service are replicated as People in SAP Field Service Management.

The mapping is as follows:


SAP Cloud for Service (Employee)	SAP Field Service Management (People)
Business Partner ID	External ID
First Name/Last Name	First Name/Last Name
Employee ID	User name
Phone	Office Phone
Mobile	Mobile Phone
E-mail	Email
Address	Address type - work

For a replicated employee, the *Plannable resource* indicator is set to false. You have to set this field manually from the SAP Field Service Management People UI screen so that the required employees can appear in the planning board.

i Note

For each replicated employee, a user is created in SAP Field Service Management. You must do the configuration and set up for users in SAP Field Service Management before they can be used in the system. If Single Sign-on (SSO) is configured, you must do the configuration and set up for users in the Identity Provider (IdP) also.

7.6 Run an Initial Load

As an administrator, you can run initial load of the master data entities (Go to [Administrator](#) > [Extract Data to External System](#) .

The available options are as follows:

- Replicate Business Partner in four sets with the following combinations:
 - Category = Organization
 - Category = Person and Business Partner Role = BUP002
 - Category = Person and Business Partner Role = CRM000

- Category = Person and Business Partner Role = BUP001
- Replicate Business Partner Relationship with the following filter criteria:
 - Business Partner Relationship Category = BUR001
- Replicate Product - You can identify the products to be replicated based on these parameters:
 - Product Category ID
 - Product ID
 - Status
- Replicate Registered Product - You can identify the registered products to be replicated based on these parameters:
 - Registered Product Category
 - Product ID
 - Serial ID
 - Status
 - Reference Date
 - Valid from Date
- Replicate Employee - You can identify the employees to be replicated based on these parameters:
 - Business Partner ID
 - Department ID

8 Configure Automatic Replication of Tickets

As an administrator, you can configure the automatic replication of tickets from SAP Cloud for Service to SAP Field Service Management. This enables tickets to be replicated as soon as they are created and saved.

Navigate to [Business Configuration](#) > [Implementation Projects](#) > [Your Project](#) > [Edit Project Scope](#) > [Questions](#) . Expand [Communication and Information Exchange](#) > [Integration with External Applications and Solutions](#) , and then select [Integration with SAP Field Service Management](#) . In the [Questions for Integration with SAP Field Service Management](#) section, select [Do you want tickets to be automatically replicated to SAP FSM?](#)

9 Integrate Tickets

Learn more about the integration of tickets and ticket items between SAP Cloud for Service and SAP Field Service Management.

9.1 Tickets and Service Calls

Tickets from SAP Cloud for Service are replicated to the SAP Field Service Management service calls.

Tickets can be replicated either manually (using the *Release to FSM* action) or automatically. For more information about the automatic replication of tickets, see [Configure Automatic Replication of Tickets \[page 27\]](#) and [Create Workflow Rules to Replicate Tickets \[page 21\]](#).

Any update made to the mapped and relevant fields in tickets also get replicated in SAP Field Service Management.

Similarly, service calls created in SAP Field Service Management are replicated to SAP Cloud for Service tickets. (Updates to these service calls are also replicated.)

After the *Release to FSM* action is triggered, the *Released to FSM* and *Requires Work* fields in the *Additional Information* section of a ticket are set to *Yes*.

The mapping of the fields are as follows:

SAP Cloud for Service (Tickets)	SAP Field Service Management (Service Calls)
Ticket ID	Service call External ID
Subject	Subject
Source	Origin
Description	Notes
Customer ID	Customer
Contact ID	Contact Person
Ticket Type	Type
Service Category	Problem Type
Assigned To	Responsible
Priority	Priority
Work Description	Resolution
Status (user status)	Status

SAP Cloud for Service (Tickets)	SAP Field Service Management (Service Calls)
Service Location <ul style="list-style-type: none"> • Street • City • Postal Code • Country 	Address <ul style="list-style-type: none"> • Street • City • Zip Code • Country
Ticket Timeline <ul style="list-style-type: none"> • Requested Start • Requested End • Completion Due 	<ul style="list-style-type: none"> • Start • End • Due
Product	Item
Registered Product ID	Equipment External ID

Points to Note

- In SAP Cloud for Service, different status profiles can be defined per ticket type. However, in SAP Field Service Management, there is only one status profile. For the integration to work, all SAP Cloud for Service ticket types that are being replicated to SAP Field Service Management must have the same status profile.
- The service ticket origin field in SAP Cloud for Service cannot be changed after it is set the first time. However, in SAP Field Service Management, the field can be updated. Any changes done to origin in service call is not replicated to SAP Cloud for Service.
- In the integrated setup (or if the integration with SAP Field Service Management is scoped in), the [Release for Scheduling](#) action and the [Appointment](#) button on the [Ticket](#) screen are not available for use after the ticket is replicated to SAP Field Service Management.

Limitations

- For a ticket to service call replication, the requested start date should be earlier than the completion due date in SAP Cloud for Service.
- For a service call to ticket replication, the service call location and dates are not replicated to the ticket service location and ticket timelines respectively.
- A service call created from the SAP Field Service Management mobile application is not replicated to SAP Cloud for Service unless an activity is created and released.

9.2 Ticket Items and Reserved Materials

The ticket part item added in SAP Cloud for Service is replicated as reserved material in SAP Field Service Management.

i Note

Only the items with the item processing type marked for [FSM Relevance](#) in configuration are replicated from SAP Cloud for Service to SAP Field Service Management.

The mapping of the fields are as follows:

SAP Cloud for Service (Ticket Item)	SAP Field Service Management (Reserved Material)
Product ID	Item External ID
Name	Item
Planned Quantity	Quantity
Technician (at item level)	Warehouse (linked to the owner, that is the technician)

i Note

Status mapping for ticket part item and service call reserved material is not relevant.

9.3 Ticket Items and Activities

A ticket service item in SAP Cloud for Service is replicated as activity in SAP Field Service Management.

i Note

Only the items with the item processing type marked for *FSM Relevance* in configuration are replicated from SAP Cloud for Service to SAP Field Service Management.

The mapping of the fields are as follows:

SAP Cloud for Service (Ticket Item)	SAP Field Service Management (Activity)
Description	Subject
Planned Quantity	Duration
Work Progress	Activity status
Requested Start	Earliest start date
Requested End	Due date
Registered Product ID	Equipment external ID

The status mapping is as follows:

SAP Cloud for Service	SAP Field Service Management Activity Status
Open	Draft
Ready	Open
In Scheduling	N/A
Started	N/A
Finished	Closed

An activity added in SAP Field Service Management is replicated to SAP Cloud for Service as a ticket item. The activity is replicated to SAP Cloud for Service only after it is released. An activity or any updates in an activity is not replicated if the activity is in draft status.

Points to Note

- In SAP Cloud for Service, when an item is added in the ticket, a service reference object determination is done; that is, the registered product at the item level is determined from the main registered product at the header level. This determination from header to item is skipped for this integration scenario, when an activity from SAP Field Service Management is replicated to SAP Cloud for Service. This means:
 - If the activity in SAP Field Service Management does not have an equipment, the registered product (service reference object) field for the corresponding item in SAP Cloud for Service is blank.
 - If the activity in SAP Field Service Management has an equipment and it is different from the one at the service call, the activity equipment is added in SAP Cloud for Service ticket header (as a service reference object).
- When an activity is replicated from SAP Field Service Management to SAP Cloud for Service, the activity status is not replicated to item status (work progress). The initial work progress for the ticket service item is set based on the existing configurations in SAP Cloud for Service.

Limitations

- The delete operation is not supported. That is, if a ticket item is deleted, the corresponding entity in SAP Field Service Management is not deleted.
- If a released activity is unassigned in SAP Field Service Management, the original activity is set to *Canceled* and a new one is created. If the new activity is then assigned to a different technician and released, a new item is created in SAP Cloud for Service. The existing ticket item (corresponding to the original activity) is not updated.

9.4 T&M Journal, Ticket Items, and Time Entries

After the T&M Journal is approved in SAP Field Service Management, the following updates happen in SAP Cloud for Service:

- Confirmed material is replicated as an item in the ticket.
- Mileage is replicated as an item in the ticket.
- These items are added with reference to the service item (the activity for which the T&M journal is maintained) – the parent is maintained.
- Actuals are maintained and *Work Progress* is set to *Finished* for these items and also for the existing service item.
- The product and item processing type to create the ticket items are determined based on the defined rules.

Replication of T&M Journal (Effort) to Time Entries

Effort is replicated as Time Entries in the ticket with status as *In preparation*.

Points to Note

To be replicated from SAP Field Service Management to SAP Cloud for Service:

- Activities must be in the *Closed* status for the related T&M approved confirmations.
- All T&M confirmations must be linked to an activity in SAP Field Service Management.

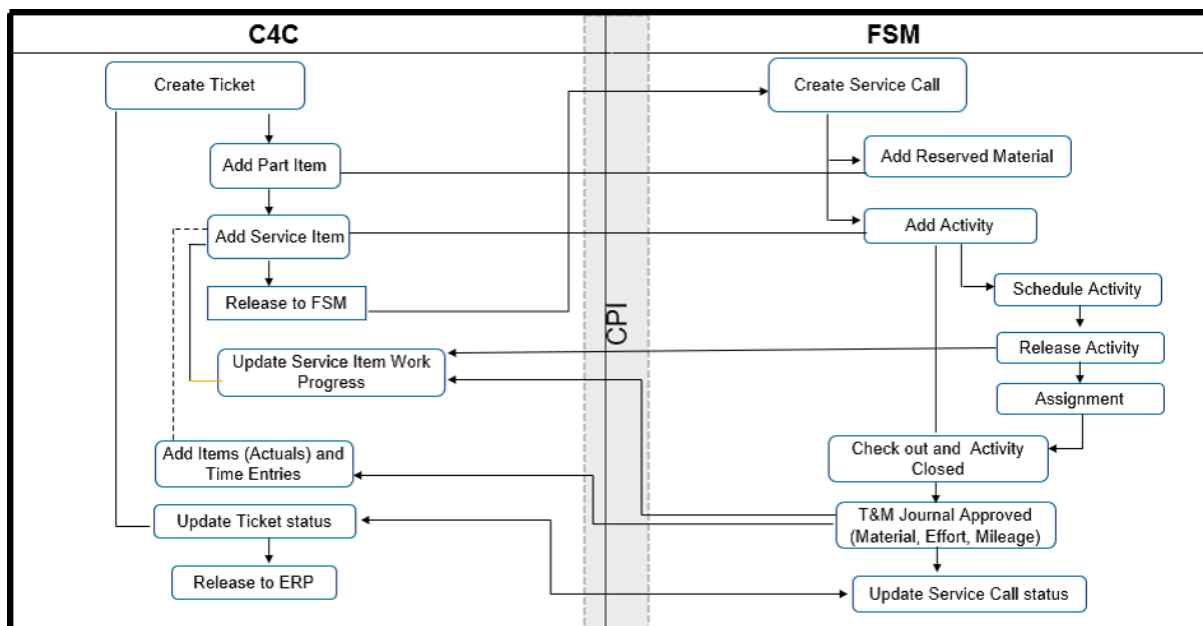
Limitations

- In SAP Field Service Management, the T&M entries can be created for multiple technicians for the same activity. However, in SAP Cloud for Service, all actuals are created for the technician to whom the activity is assigned to.

- Any new T&M entries added to a closed activity are not replicated to SAP Cloud for Service.

9.5 The Process Flow - An Example

The following image displays an example flow of the replication of a ticket to a service call:



As the image depicts, a ticket is created in SAP Cloud for Service (manually or via a communication channel). The user adds a part item and a service item in the ticket, and selects the *Release to FSM* action. The ticket is replicated to SAP Field Service Management as a service call. A reserved material is created for the part item and an activity is created for the service item. The activity is scheduled and released. A technician gets the assignment. The service item work progress is updated in SAP Cloud for Service. After performing the task, the technician checks out, updates the T&M Journal, and the activity is closed. The T&M Journal is approved. The work progress of the service item is set to *Finished* in SAP Cloud for Service. The T&M Journal, with the details of the effort, time, and material, is replicated to SAP Cloud for Service. The corresponding items and entities are added with actuals and the work progress is set to *Finished*. The status of the service call and ticket are updated and in SAP Cloud for Service, it is released to ERP.

9.6 Run an Initial Load

As an administrator, you can run an initial load of existing tickets.

Before you run the initial load of tickets, set the FSM relevance in bulk for all the ticket items that are created after the item processing type configuration is done. Navigate to ► [Administrator](#) ► [Service and Social](#) ► [Field Service Management](#) ► [Set Ticket Item as FSM relevant](#) ►. Provide the criteria to select the tickets for which the items need to be replicated to SAP Field Service Management.

To run an initial load of the existing tickets, go to ► *Administrator* ► *Extract Data to External System* ►. For the *Replicate Ticket* option, the parameters are as follows:

- Creation Date
- Status
- Ticket Type

When you run an initial load of tickets, *Released to FSM* is set for all the instances, if they are not set already.

10 Integration at the User Interface Level

Learn more about the configuration and use of the UI-level integration for SAP Cloud for Service and SAP Field Service Management.

10.1 Configure Integration at the User Interface Level

As an administrator, you can configure the UI-level integration for SAP Cloud for Service and SAP Field Service Management.

Prerequisites

- Single Sign-on (SSO) with Security Assertion Markup Language (SAML) must be enabled in the SAP Cloud for Service and SAP Field Service Management systems.
- The SAP Cloud for Service and SAP Field Service Management tenants are added in the Identity Provider (IdP) and users are created in IdP. With this, the user does not need to log on again, while navigating from SAP Cloud for Service to SAP Field Service Management.

To configure the integration, follow these steps:

1. In SAP Cloud for Service, navigate to ► *Administrator* ► *Service and Social* ► *Field Service Management* ▾, and click *Configure FSM Integration*.
2. On the *Field Service Management* page, enter the details as described in the following table:

Field	Description
FSM URL Prefix	For production environment, maintain https://auth.core-suite.com ➦ For quality environment, maintain https://qt.dev.core-suite.com ➦
FSM URL	Maintain the system URL of FSM in the https://<cluster>.coresystems.net format: For example, https://de.coresystems.net
FSM Account	Enter the FSM account.
FSM Client ID	Enter the FSM Client ID to be integrated with the SAP Cloud for Service system.
FSM Client Secret	Enter the client secret for the corresponding FSM client.

3. Click *Save and Close*.

10.2 Create a Custom Card for FSM Dispatching Board

As an administrator, you can create a custom card for the SAP Field Service Management dispatching board.

To create a custom card, follow these steps:

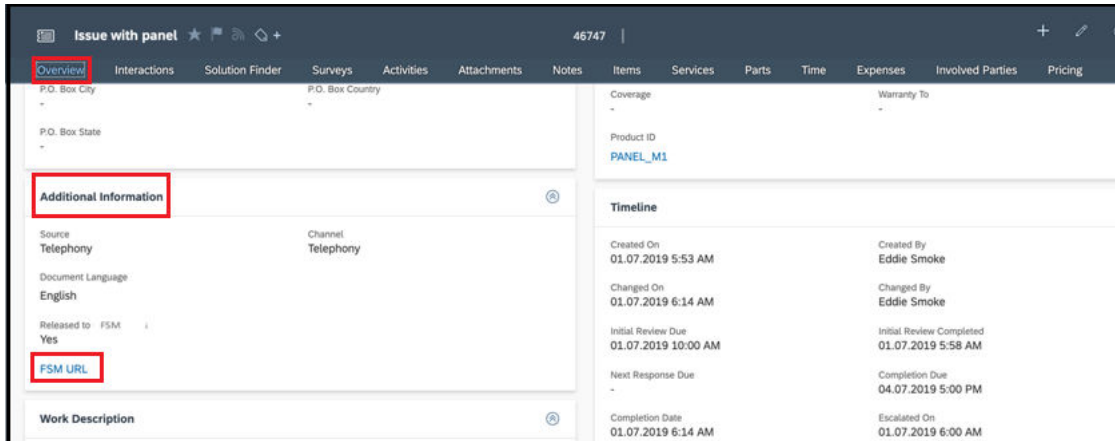
1. In SAP Cloud for Service, go to the *Home* page and click the edit icon.
2. In the *Homepage Personalization and Adaptation* window, click *Adapt*.
3. In the *Select User Role* window, select the user role. If you want to apply changes to all the roles, select *DEFAULT*.
4. Click *Go*.
5. In the *Add Cards* window, select *Create Custom Card*.
6. In the *Create Custom Card* window, enter the details as described in the following table:

Field	Description
Type	Select <i>URL</i> .
Title	Enter a title for the card. For example, FSM Dispatching Board .
URL	<p>Enter the FSM Dispatching Board URL in the following format:</p> <pre><FSM-URL-Prefix>/api/oauth2/v1/ sso_redirect?accountName=<account- here>&clientInfo=<client- creds>&extraParams=-https:// <cluster>.coresystems.net/workforce- management</pre> <ul style="list-style-type: none"> ○ For <FSM-URL-Prefix>: <ul style="list-style-type: none"> ○ Maintain <code>https://auth.coresuite.com</code> for production environment ○ Maintain <code>https://qt.dev.coresuite.com</code> for quality environment ○ For <client-creds>, maintain the FSM client credential, which is the Base64 encoding of Client ID:Client Secret
Icon	Select an icon.

7. Click *Save*.
8. In the *Publish Changes* window, select *Update only the cards you've changed*, and click *Publish*.
9. Click *Leave Adaptation Mode*. The custom card is created.

10.3 Use the UI-Level Integration

After the ticket is replicated to SAP Field Service Management system, the [FSM URL](#) link is activated in the the [Additional Information](#) section tab of a ticket in SAP Cloud for Service.



When you click the [FSM URL](#) link, the corresponding SAP Field Service Management service call is launched in a new window.

After the custom card is created, you can launch the SAP Field Service Management dispatching board from the SAP Cloud for Service home page.

11 More Information



- For more information about SAP Field Service Management, see <https://docs.coresystems.net/help-index.html> or <https://www.sap.com/products/field-service-management.html>.
- For more information about FSM Connector, see <https://docs.coresystems.net/platform-integration/fsm-connector.html>.
- For more information about configuring SAP Cloud for Service for SSO, see <https://help.sap.com/viewer/abfba1342cfb4832ab722fa041f6c4b7/1908/en-US/f1e6f23267b542ce9a906823c70dc583.html>.
- For information about integrating SAP IAS SAML 2.0 with SAP Field Service Management, see <https://docs.coresystems.net/sap-saml-integration.html>.

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