Implementation Guide

- Sales Order Fulfillment Template App

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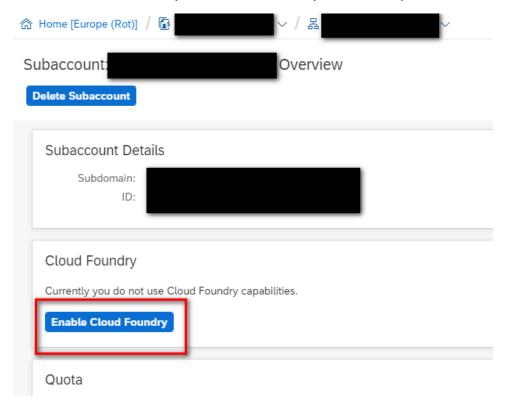
0.Prerequisites

- An SAP Cloud Platform global account with entitlement to the global track and trace option for SAP Logistics Business Network, 1 portal service quota and 10 GB Application Runtime quota
- To integrate with ERP, an SAP ERP or SAP ECC system running on Netweaver 7.31 or higher with SAP NOTE 2937175 being implemented
- To integrate with visibility provider, log your incident in SAP BCP system with component "SCM-LBN-GTT-COR"

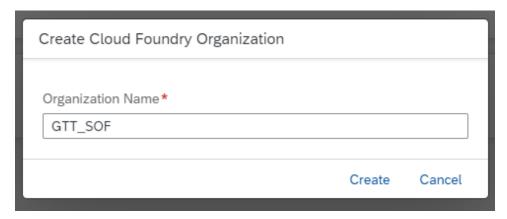
1.Environment Configuration in Logistics Business Network, Global Track and Trace Option

1.1 Enable Cloud Foundry and Create Space

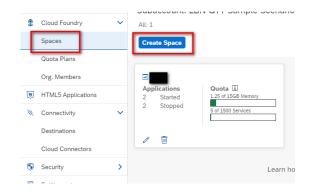
1. Click "Enable Cloud Foundry" to enable the development landscape

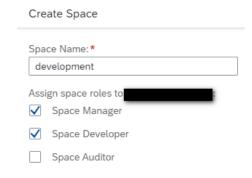


2. Fill in the Organization Name and click "Create"



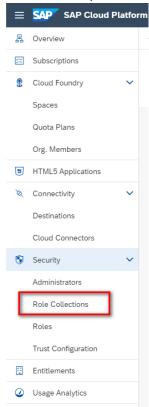
3. Go to "Cloud Foundry" -> "Spaces" Click "Create Space" Fill in the Space Name and click "Create"



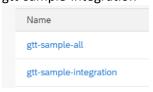


1.2 Maintain Roles and Users

1. Go to "Security" -> "Role Collections"



 Create 2 role collections (You can have user-defined names): gtt-sample-all gtt-sample-integration



- Role template "gtt-sample-all" is granted to users who have access to global track and trace option and *Sales Order Fulfillment* template app.
- Role template "gtt-sample-integration" is granted to technical users only who have access to the global track and trace APIs for development purpose.
- 3. Go to the role of "gtt-sample-all", and add the following roles:

Role	Application
MessageLogAdminTemplate	lbn_gtt_core
DataModelAdminTemplate	lbn_gtt_core
LocationProcessTemplate	lbnplatform-loc-broker
BPEditTemplate	lbnplatform-bprepo
BusinessPartnerDiscoveryTemplate	lbnplatform-bprepo

InviteBPProcessTemplate	lbnplatform-bprepo
ManageInvitationsProcessTemplate	lbnplatform-bprepo
BlockStoreProcessTemplate	Ibn-retentionmanagement-sb
ReminderTemplateProcessTemplate	Ibn-retentionmanagement-sb

- 4. Grant "gtt-sample-all" to your **application** users:
 - Application users are those who have access to global track and trace option and Sales
 Order Fulfillment template app.

 $\label{thm:continuous} \mbox{IT Administrator needs to maintain application users in identity provider.}$

For example, <u>user1@sap.com</u>

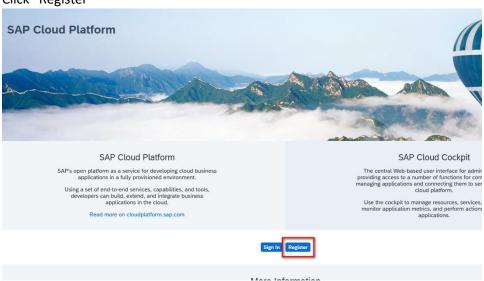


Note: The application user in this step should be different from the technical user created in Step 1.3.

1.3 Maintain Technical User

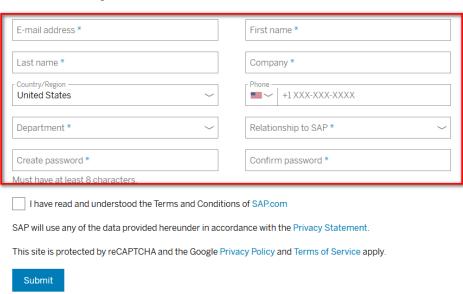
1. Go to the SAP Cloud Platform to create the technical user account: https://account.hana.ondemand.com/#/home/welcome



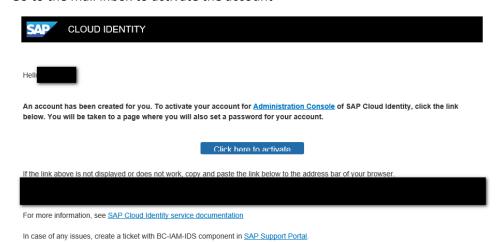


2. Fill in the mandatory fields:

Tell us about yourself



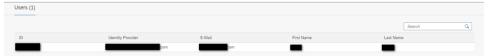
3. Go to the mail inbox to activate the account



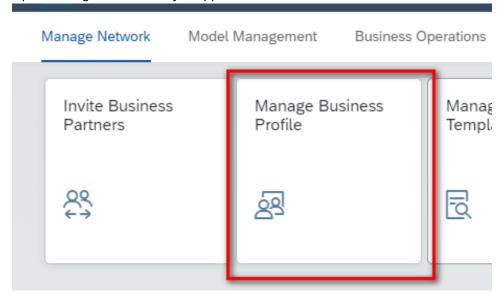
4. As shown in Step 1.2, go to the role of "gtt-sample-integration", and add the following roles:

Role	Application
EMIDocIntegrationTemplate	lbn_gtt_core
MetadataServiceIntegrationTemplate	lbn_gtt_core
ReadServiceIntegrationTemplate	lbn_gtt_core
WriteServiceIntegrationTemplate	lbn_gtt_core

5. Grant "gtt-sample-integration" to your **technical** user: For example, <u>techuser1@techcompany.com</u>



6. Go to SAP Fiori Launchpad for global track and trace option Open *Manage Business Profile* app



7. Add one Alternate Identifier:

Identifier Type: Technical User

ID: the email address of technical user



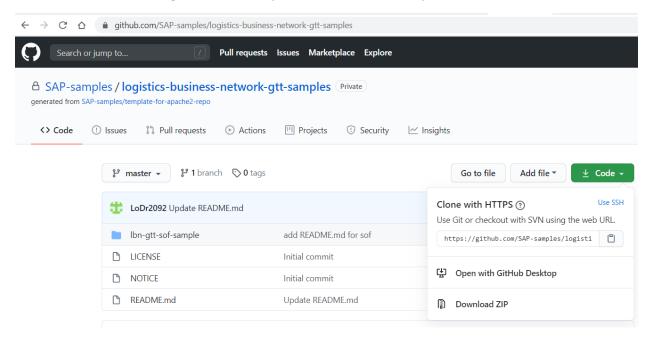
Note: The technical user in this step should be different from the application user in Step 1.2.4.

2.Implement Sales Order Fulfillment Template App

2.1 Download Template Code

Go to https://github.com/SAP-samples/logistics-business-network-gtt-samples.

Download and extract, or git clone the template code from SAP-samples on GitHub.



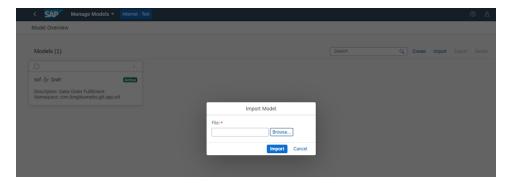
2.2 Download and Setup Tools

- 1. Install JDK 8 and Maven
- Install NPM, Node JS, and grunt-cli
 https://www.saplearners.com/how-to-install-node-js-and-npm/

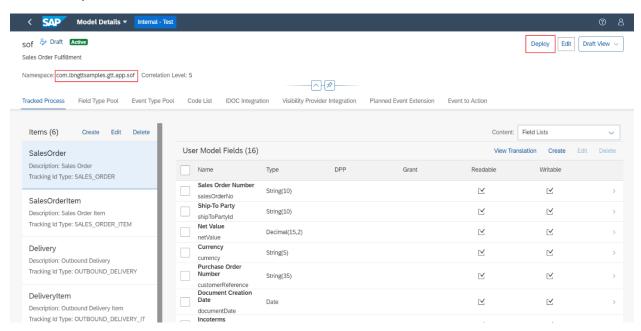
 Run the following command after NPM is installed:
 npm config set @sap:registry "https://npm.sap.com" -g
- Install Cloud Foundry Command Line Interface https://developers.sap.com/tutorials/cp-cf-download-cli.html
- 4. Install MultiApps CF CLI Plugin https://github.com/cloudfoundry-incubator/multiapps-cli-plugin
- Install Cloud MTA Build Tool (MBT) https://sap.github.io/cloud-mta-build-tool/download/
- 6. Install MAKE https://sap.github.io/cloud-mta-build-tool/makefile/

2.3 Deploy Model

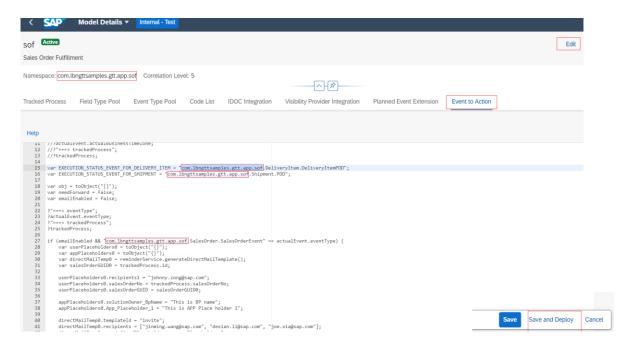
- Go to the folder *model* with downloaded source code. Make sure you have a JSON file *sof-model-YYYYMMDDxx.json* (e.g. sof-model-2020091001.json).
- Open Manage Models app on SAP Fiori Launchpad for global track and trace option
- Click "Import"
- Click "Browse" to select the sof-model-YYYYMMDDxx.json file
- Click "Import" to import the model



- Click "Deploy"
- Write down the model namespace for later use, in this case, "com.lbngttsamples.gtt.app.sof" in the picture below



- Click "Edit"
- Go to Event to Action tab
- Replace all the namespace strings, in this case, "com.lbngttsamples.gtt.app.sof" in Event to
 Action script with the model namespace you wrote down in the previous step
- Click "Save and Deploy" to deploy the model



2.4 Package and Deploy

2.4.1 Login to SAP Cloud Foundry

- Open a command window, cf login to SAP Cloud Foundry with your username and password
- Select the organization and space in which you want to deploy the template apps

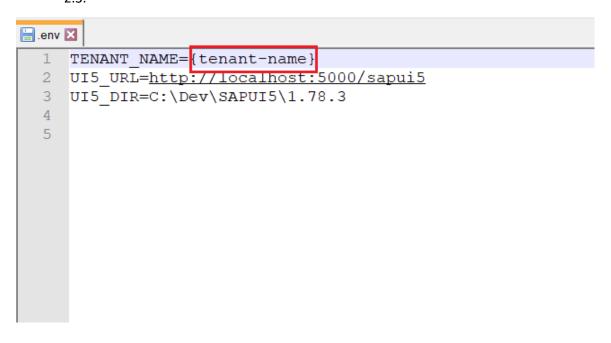


2.4.2 Package and Deploy Sales Order Fulfillment Frontend App

Go to GTT-V2-Sample-TrackSalesOrders-UI directory.

• Open the ./UI/.env file

• Replace {tenant-name} with part of the namespace you got from Step 2.3. For example, replace it with "lbngttsamples" in "com.lbngttsamples.gtt.app.sof" shown in Step 2.3.



In the command line tool,

Run the following command to build the MTAR package:
 mbt build

A MTAR file ./mta_archives/gtt-v2-ui-sample-track-salesorders_xxx.mtar is then generated.



To deploy the MTAR package in Cloud Foundry, run the following command:
 cf deploy ./mta_archives/gtt-v2-ui-sample-track-salesorders-service_xxx.mta

The deployment time depends on your network conditions.

2.4.3 Package and Deploy SAP Fiori Launchpad for *Sales Order Fulfillment* **Go to GTT-V2-Sample-App-FLP directory**.

- Open the *mta.yaml* file
- Replace {unique-identifier} with unique information such as your company name or cloud foundry global account name

```
🔚 mta.yaml 🗵
               name: lbn-gtt-sample-app-appRouter
               type: approuter.nodejs
path: flp_appRouter
 parameters:
                  disk-quota: 256M
memory: 256M
                  routes:
               routes:
- route: lbn-gtt-samples-app-flp-{unique-identifier}} ${domain}
properties:
SAP_JWT_TRUST_ACL:
- clientid: "*"
                     identityzone: "*"
                 destinations:
    - name: lbn-gtt-sof-api
    url: "~{lbn-gtt-sof-api/url}"
                        forwardAuthToken: true
                 - name: lbn-gtt-sample-app-uaa
- name: lbn-gtt-sample-app-runtime
- name: lbn-gtt-sample-portal-resources
                 - name: lbn-gtt-sof-api
            - name: flp
  type: com.sap.portal.content
  path: flp
               parameters:
               parameters:
stack: cflinuxfs3
memory: 128M
buildpack: 'https://github.com/cloudfoundry/nodejs-buildpack/releases/download/v1.6.39/nodejs-buildpack-cflinuxfs3-v1.6.39.zip'
requires:
                 - name: lbn-gtt-sample-app-uaa
- name: lbn-gtt-sample-portal-resources
- name: gtt-ui-sample-track-salesorders-app-host
       =resources:
            - name: lbn-gtt-sample-app-runtime
parameters:
           service-plan: app-runtime
service: html5-apps-repo
type: org.cloudfoundry.managed-service
name: lbn-gtt-sample-portal-resources
parameters:
             url: https://gtt-sample-track-salesorders-service-{unique-identifier}.${default-domain}
            - name: lbn-gtt-sample-app-uaa
```

In the command line tool,

Run the following command to build the MTAR package:

mbt build

A MTAR file ./mta_archives/lbn-gtt-sample-app-flp_xxx.mtar is then generated.

• Deploy the MTAR package in Cloud Foundry by running the following command:

cf deploy ./mta_archives/lbn-gtt-sample-app-flp_xxx.mtar

2.4.4 Package and Deploy Sales Order Fulfillment Backend Service

Replace User/Password, Here Map License Key and Host Configuration

- Obtain Here Map license from Step 4.1
- Open the file *mta.yaml* under the folder "GTT-V2-Sample-TrackSalesOrders-Service":

```
schema-version: '3.1'
     ID: gtt-v2-sample-track-salesorders-service
     version: 2.3.0
   - name: gtt-sample-track-salesorders-service
      type: java
      path: srv/
   properties:
10
        SPRING PROFILES ACTIVE: cloud
        DESTINATION_GTT: gtt_core_engine_flp_base_url
11
        HERE_MAP_KEY: {here-map-license-key}
13 parameters:
14
        buildpack: java buildpack
15
        health-check-timeout: 180
        host: gtt-sample-track-salesorders-service-{unique-identifier}
16
   build-parameters:
17
        ignore:
           "*.md"
19
        build-result: target/*.jar
21
         timeout: 10m
      requires:
23
       - name: lbn-gtt-sample-app-uaa
24
    resources:
26 p- name: lbn-gtt-sample-app-uaa
       type: org.cloudfoundry.existing-service
28
29
```

- Replace {here-map-license-key} with the license key you got
- Replace {unique-identifier} with unique information such as your company name or cloud foundry global account name
- Open the file ./srv/src/main/java/com/sap/gtt/v2/sample/sof/constant/Constants.java
 - Replace "com.lbngttsamples.gtt.app.sof" with the model namespace you got from Step 2.3

```
Constantsjava 

package com.sap.gtt.v2.sample.sof.constant;

public class Constants {
    public static final String GTT_MODEL_NAMESPACE = "com.lbngttsamples.gtt.app.sof";
    public static final String MODEL_NAMESPACE = "com.lbngttsamples.gtt.app.sof";
    public static final String GTT_MODEL_NAMESPACE = "com.lbngttsamples.
```

• Run the following command to build the MTAR package:

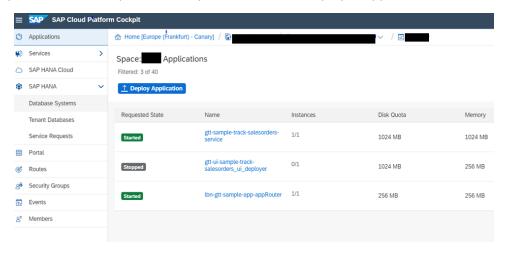
mbt build

A MTAR file ./mta archives/qtt-v2-sample-track-salesorders-service xxx.mtar is then generated.

Deploy the MTAR package in Cloud Foundry by running the following command:
 cf deploy ./mta_archives/gtt-v2-sample-track-salesorders-service_xxx.mtar

2.4.5 Check Deployed Apps on SAP Cloud Foundry Cockpit

After operations from Step 2.4.1 to Step 2.4.3, check the deployed apps on SAP Cloud Platform Cockpit.

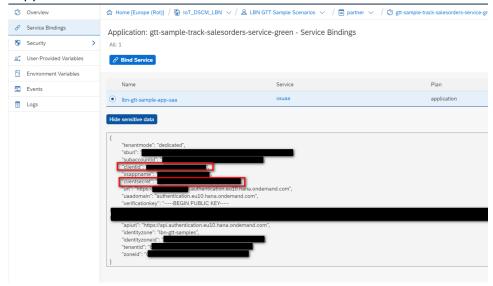


2.4.6 Maintain Destination

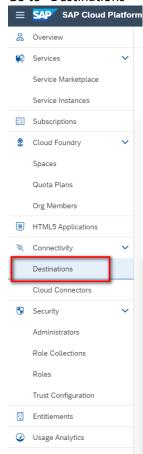
- 1. Obtain the UAA Token
- Go to the Sales Order Fulfillment backend application that you have deployed



- Find the environment of UAA
- Copy the value of clientid and clientsecret



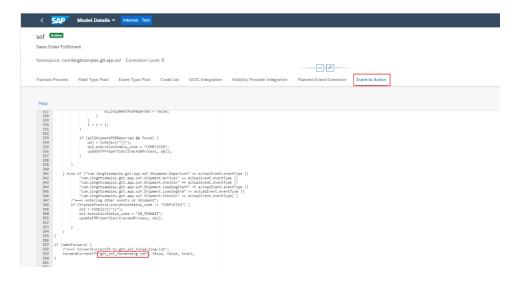
2. Go to "Destinations"



3. Configure Destination of Event to Action Forwarding

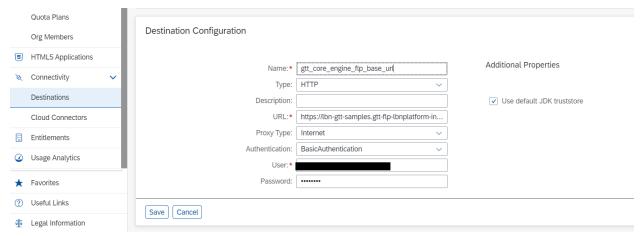
Name	e.g. gtt_sof_forwarding_int
Туре	HTTP
Description	<optional></optional>
URL	e.g. https://gtt-sample-track-salesorders-
	<pre>service.cfapps.eu10.hana.ondemand.com/sap/logistics/gtt/sample/sof/rest/v1/</pre>
	<u>forward</u>
Proxy Type	Internet
Authenticati	OAuth2ClientCredentials
on	
Client ID	Copied in the previous step
Client Secret	Copied in the previous step
Token	e.g. https://lbn-gtt-
Service URL	samples.authentication.eu10.hana.ondemand.com/oauth/token

Note: You need to update the destination name in *Event to Action* script of *Sales Order Fulfillment* model if you change the name from "gtt_sof_forwarding_int" to others.



4. Configure Destination of GTT Core Engine Base URL

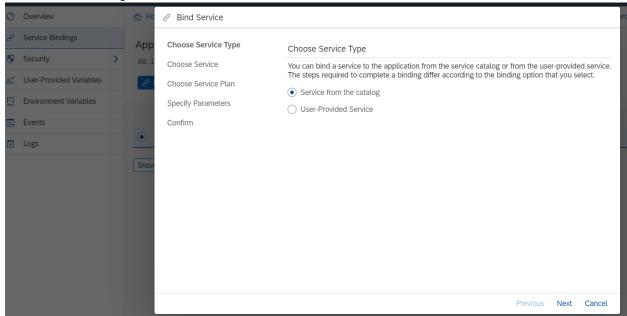
Name	gtt_core_engine_flp_base_url		
Туре	HTTP		
Description	<optional></optional>		
URL	e.g. https://lbn-gtt-samples.gtt-flp-lbnplatform-		
	int.cfapps.sap.hana.ondemand.com/api		
Proxy Type	Internet		
Authentication	BasicAuthentication		
User	User from Step 1.3		
Password	Password from Step 1.3		



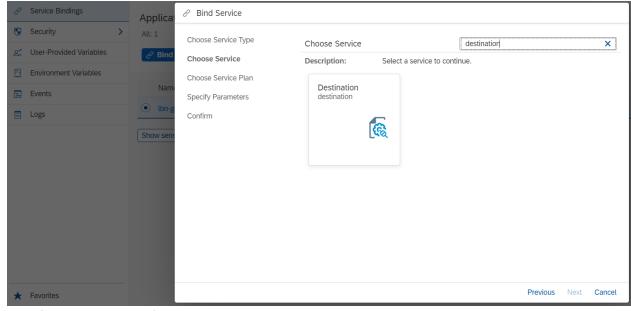
5. Bind Destination Service

Go to the Sales Order Fulfillment backend application that you have deployed.

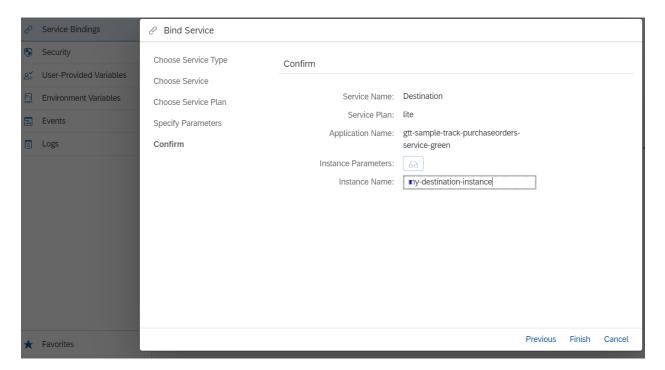
Click Service Bindings and then click Bind Service button.



Search "destination", then click next.



Specify instance name of the destination service. Then click Finish.



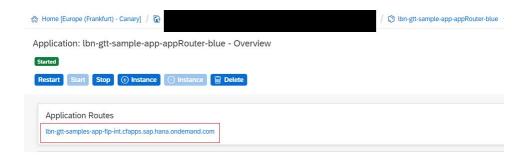
2.4.7 Maintain Roles and Users

1. As shown in Step 1.2, go to the role of "gtt-sample-all", and add the following role:

Role	Application
SalesOrderFulfillmentAppUser	tt_sof_{space}

2.4.8 Open Sales Order Fulfillment Template App from SAP Fiori Launchpad

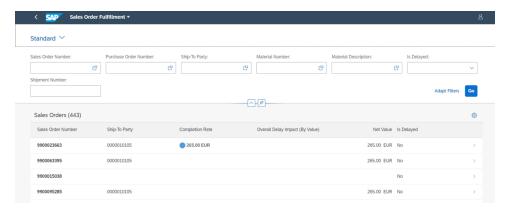
Obtain the Application Routes from SAP Cloud Foundry Cockpit



• Click the link of Application Routes
The system browser then navigates to the SAP Fiori Launchpad of *Sales Order Fulfillment*



• Open the Sales Order Fulfillment template app



3. Implement ERP Extractor

For ERP extractor implementation, please refer to the following document:

02_Extractor_Creation_Guide-SOF.pdf

4. Other Configuration

4.1 Obtain Here Map License

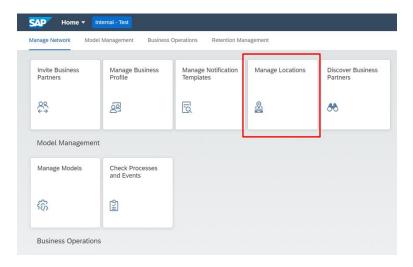
To have the map view, log the incident with the URL of Fiori Launchpad of *Sales Order Fulfillment* template app in SAP BCP system under component "SCM-LBN-GTT-COR". The Here Map tile service is enabled manually.

For quick validation, you can also use the tile service of other map services.

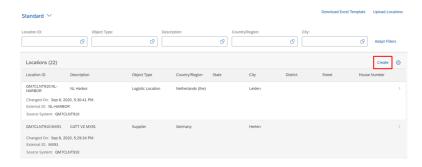
4.2 Maintain Location Master

To show stops and planned events in the map, you need to maintain location master data with valid geocoordinates in *Manage Locations* app.

1. Open Manage Locations app in your SAP Fiori Launchpad for global track and trace option



2. Click "Create" to create a new location

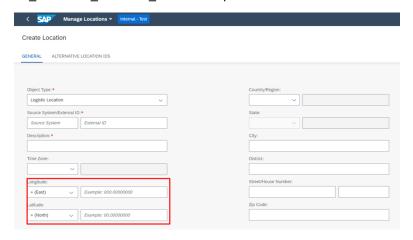


3. Maintain location information with valid geocoordinates

To integrate with ERP, you need to keep the Object Type, Source System, and External ID location consistent with ERP location information.

To know the details, please refer to the following document:

02_Extractor_Creation_Guide-SOF.pdf



4.3 Maintain Data Contributors

To receive actual events from other business partners, you need to invite them to join your business network. You can find more details in Chapter 6.3 of Administration Guide for Version 2.