

# Implementation Guide

## – *Track PO Fulfillment* Template App

### Contents

0. Prerequisites .....	3
1. Environment Configuration in Logistics Business Network, Global Track and Trace Option.....	3
1.1 Enable Cloud Foundry and Create Space .....	3
1.2 Maintain Roles and Users.....	5
1.3 Maintain Technical User.....	6
1.4 Maintain Destination of GTT Core Engine Base URL.....	9
2. Implement <i>Track PO Fulfillment</i> Template App .....	10
2.1 Download Template Code .....	10
2.2 Download and Setup Tools.....	10
2.3 Deploy Model .....	12
2.4 Package and Deploy.....	14
2.4.1 Login to SAP Cloud Foundry.....	14
2.4.2 Package and Deploy <i>Track PO Fulfillment</i> Frontend App .....	15
2.4.3 Package and Deploy SAP Fiori Launchpad for <i>Template Apps</i> .....	15
2.4.4 Package and Deploy <i>Track PO Fulfillment</i> Backend Service.....	23
2.4.5 Check Deployed Apps on SAP Cloud Foundry Cockpit .....	25
2.4.6 Maintain Destination of Forwarding URL .....	25
2.4.7 Maintain Roles and Users .....	27
2.4.8 Open <i>Track PO Fulfillment</i> Template App from SAP Fiori Launchpad .....	28
3. Implement ERP Extractor .....	29
4. Other Configuration.....	30
4.1 Obtain A Here Map License .....	30
4.2 Maintain Location Master .....	30
4.3 Maintain Data Contributors .....	31

## Note

The SAP Cloud Platform brand is retired. For more information, see [A Robust Platform for RISE with SAP !\[\]\(529949c2c3dadbaa4e538e8c643454bc\_img.jpg\)](#). Parts of this content were created before our branding changes related to SAP technology were announced in January 2021.

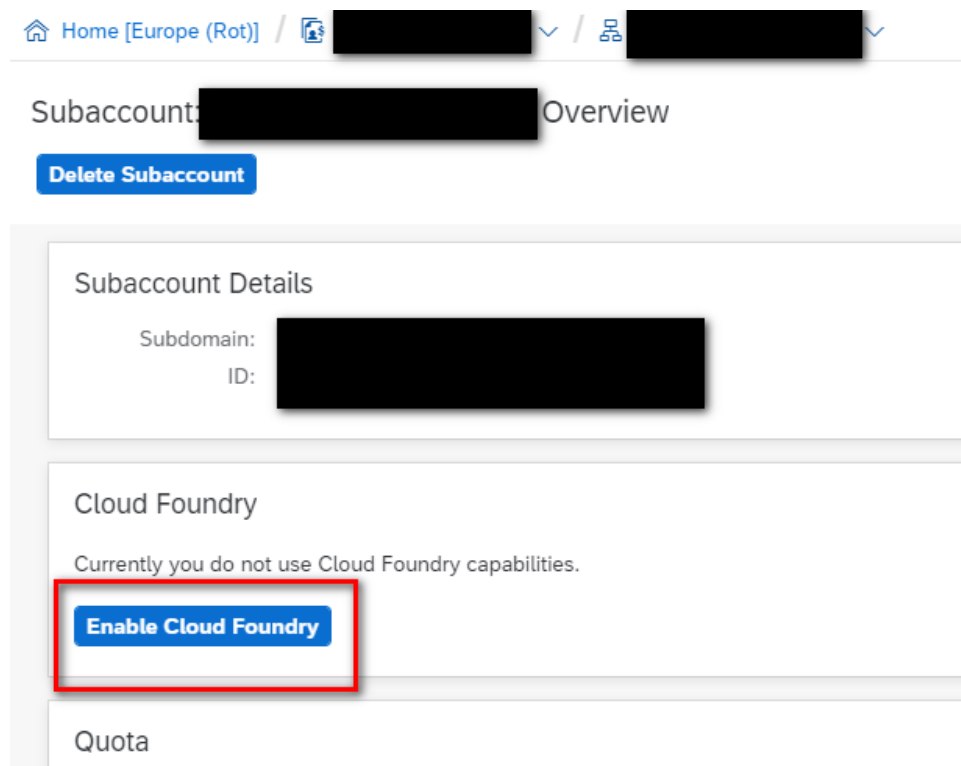
## 0.Prerequisites

- A SAP Cloud Platform global account with entitlement to the global track and trace option for SAP Logistics Business Network, 1 portal service quota and 2 GB Application Runtime quota.
- To integrate the global track and trace option with ERP, your SAP ERP system should be running on Netweaver 7.31 or higher with SAP NOTE 2937175 being implemented. Besides, to implement the template apps' extractor codes, your SAP ERP system version should be S4 1909 SP03 on premise or higher.
- To integrate with visibility providers, log your incident in SAP BCP system with component 'SCM-LBN-GTT-COR'.

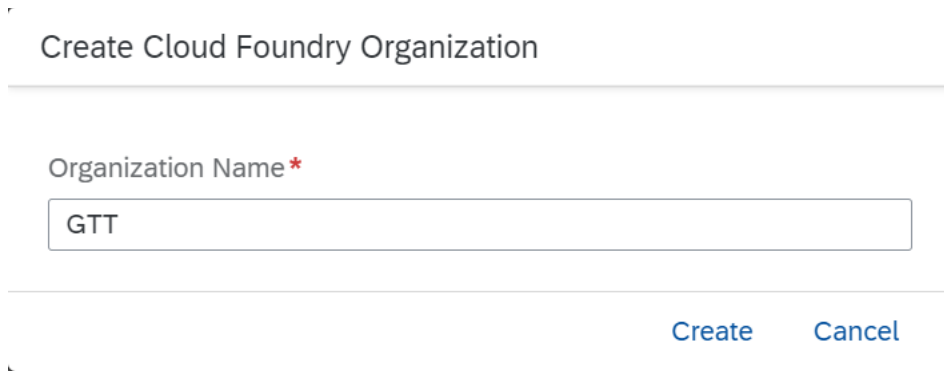
## 1.Environment Configuration in Logistics Business Network, Global Track and Trace Option

### 1.1 Enable Cloud Foundry and Create Space

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

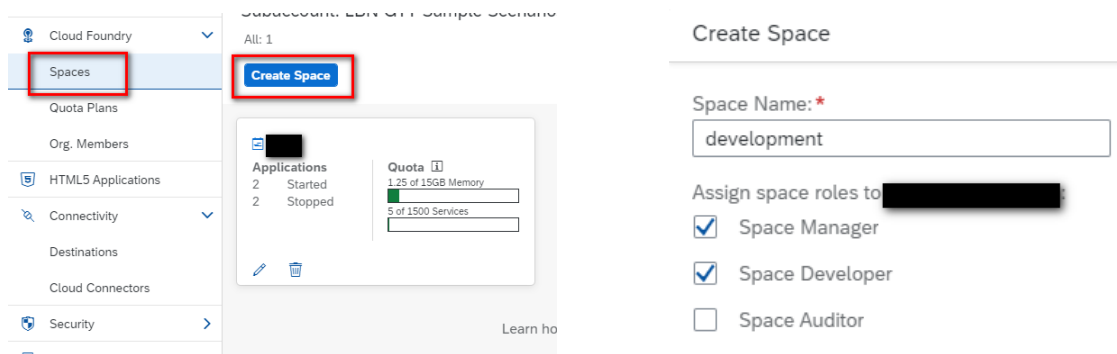


2. Fill in the Organization Name and click 'Create'



The screenshot shows a web form titled "Create Cloud Foundry Organization". It has a single text input field labeled "Organization Name\*" with the value "GTT" entered. At the bottom right of the form are two buttons: "Create" and "Cancel".

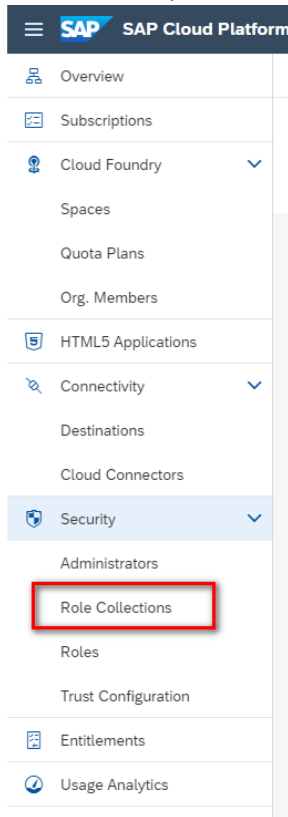
3. Go to 'Cloud Foundry' -> 'Spaces'  
Click 'Create Space'  
Fill in the Space Name and click 'Create'



The screenshot is divided into three parts. On the left is a sidebar menu with "Cloud Foundry" expanded, showing "Spaces" (highlighted with a red box), "Quota Plans", "Org. Members", "HTML5 Applications", "Connectivity", "Destinations", "Cloud Connectors", and "Security". In the center is a "Spaces" overview card (also with a red box around the "Create Space" button) showing "All: 1" space, a table of applications (2 Started, 2 Stopped), and a quota bar for memory and services. On the right is the "Create Space" form, which has a "Space Name:" field containing "development" and a section "Assign space roles to" with checkboxes for "Space Manager" (checked), "Space Developer" (checked), and "Space Auditor" (unchecked). A redacted name is visible next to the role checkboxes.

## 1.2 Maintain Roles and Users

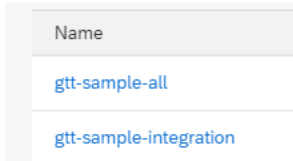
1. Go to 'Security' -> 'Role Collections'



2. 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 the global track and trace option and *Track PO 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

InviteBPPProcessTemplate	lbnplatform-bprepo
ManageInvitationsProcessTemplate	lbnplatform-bprepo
BlockStoreProcessTemplate	lbn-retentionmanagement-sb
ReminderTemplateProcessTemplate	lbn-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 *Track PO Fulfillment* template app.

IT Administrator needs to maintain application users in identity provider.

For example, [user1@sap.com](mailto:user1@sap.com)



The screenshot shows a table of users in the SAP Identity Provider. The table has columns for ID, Identity Provider, E-Mail, First Name, and Last Name. There are three rows of data, all with 'SAP ID Service' as the identity provider and email addresses ending in '@sap.com'. The first names and last names are redacted with black boxes. A search bar is visible in the top right corner.

ID	Identity Provider	E-Mail	First Name	Last Name
[Redacted]	SAP ID Service	[Redacted]@sap.com	[Redacted]	[Redacted]
[Redacted]	SAP ID Service	[Redacted]@sap.com	[Redacted]	[Redacted]
[Redacted]	SAP ID Service	[Redacted]@sap.com	[Redacted]	[Redacted]

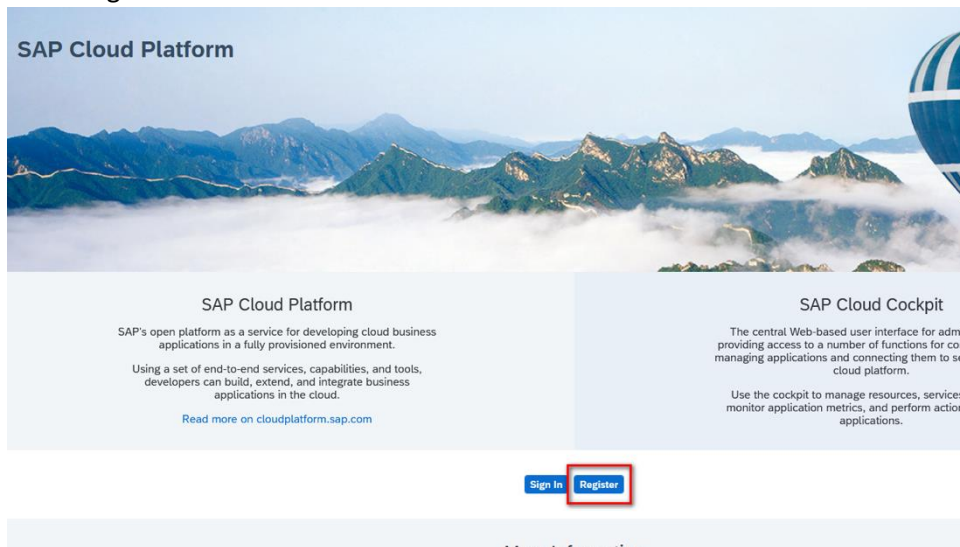
Note: The application user in this step should be different from the technical user created in [Step 1.3](#).

### 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>

Click 'Register'



2. Fill in the mandatory fields:

Tell us about yourself

E-mail address \*

First name \*

Last name \*

Company \*

Country/Region  
United States

Phone  
+1 XXX-XXX-XXXX

Department \*

Relationship to SAP \*

Create password \*

Confirm password \*

Must have at least 8 characters.


☐ I have read and understood the Terms and Conditions of [SAP.com](#)

SAP will use any of the data provided hereunder in accordance with the [Privacy Statement](#).

This site is protected by reCAPTCHA and the Google [Privacy Policy](#) and [Terms of Service](#) apply.

Submit

3. Go to the mail inbox to activate the account

 CLOUD IDENTITY

Hello [redacted]

An account has been created for you. To activate your account for [Administration Console](#) of SAP Cloud Identity, click the link below. You will be taken to a page where you will also set a password for your account.

Click here to activate

If the link above is not displayed or does not work, copy and paste the link below to the address bar of your browser.

[redacted]

For more information, see [SAP Cloud Identity service documentation](#)

In case of any issues, create a ticket with BC-IAM-IDS component in [SAP Support Portal](#).

4. As shown in [Step 1.2](#), go to the role of 'gtt-sample-integration', and add the following roles:

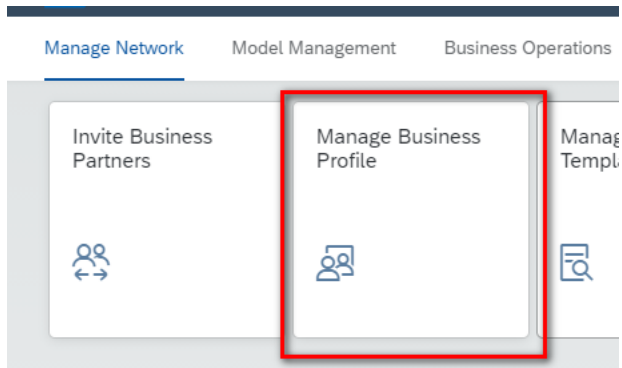
Role	Application
EMIDocIntegrationTemplate	lbn_gtt_core
MetadataServiceIntegrationTemplate	lbn_gtt_core
ReadServiceIntegrationTemplate	lbn_gtt_core
WriteServiceIntegrationTemplate	lbn_gtt_core
LocationProcessTemplate	lbnplatform-loc-broker

5. Grant 'gtt-sample-integration' to your **technical** user:  
For example, [techuser1@techcompany.com](mailto:techuser1@techcompany.com)

Users (1)

ID	Identity Provider	E-Mail	First Name	Last Name
[REDACTED]	[REDACTED].com	[REDACTED].com	[REDACTED]	[REDACTED]

6. Go to SAP Fiori Launchpad for the 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

Email	Phone Number
[REDACTED]	[REDACTED]

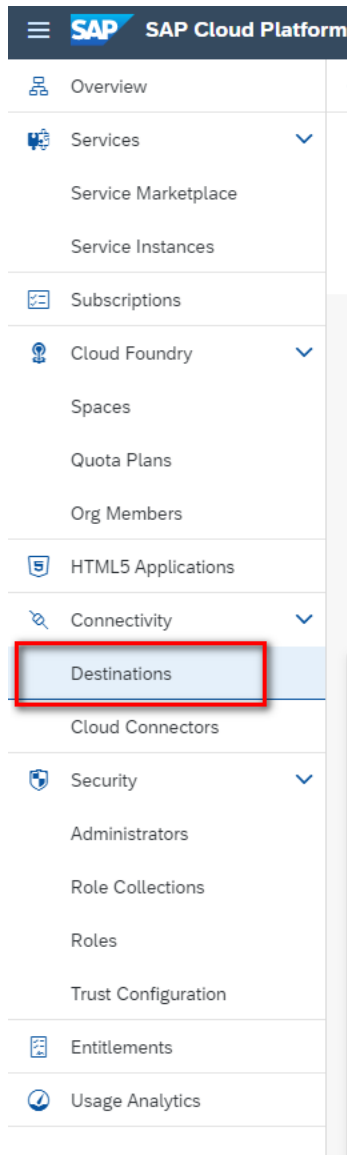
Alternate Identifiers (1)	
Identifier Type	ID
Technical User	[REDACTED].com

Note: The technical user in this step should be different from the application user in [Step 1.2.4](#).



## 1.4 Maintain Destination of GTT Core Engine Base URL

### 1. Go to Destination



### 2. Configure Destination of GTT Core Engine Base URL

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

## 2. Implement *Track PO Fulfillment* Template App

### 2.1 Download Template Code

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

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

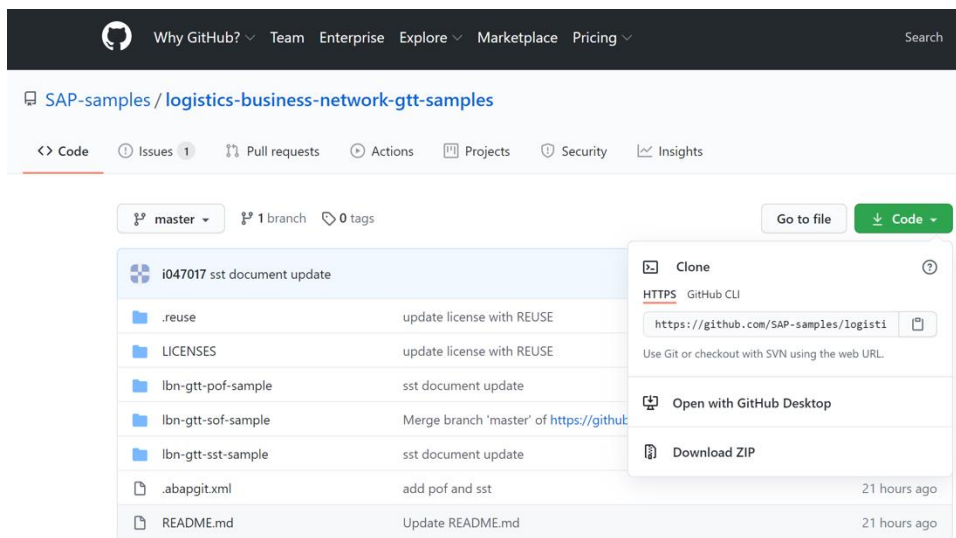
*Note: the target directory's extract or git clone path must be short.*

For example:

```
C:\>mkdir dev
```

```
C:\>cd dev
```

```
C:\dev>git clone https://github.com/SAP-samples/logistics-business-network-gtt-samples.git  
sample
```



### 2.2 Download and Setup Tools

#### 1. Download and Install git

<https://git-scm.com/download/win>

#### 2. Install JDK 8 and Maven

#### 3. Install NPM, Node JS, and grunt-cli

<https://www.saplearners.com/how-to-install-node-js-and-npm/>

*Note: check versions of node and npm. We recommend using node version 10.xx.xx.*

```
C:\dev>node --version
```

```
v10.19.0
```

```
C:\dev>npm -version
```

```
6.13.4
```

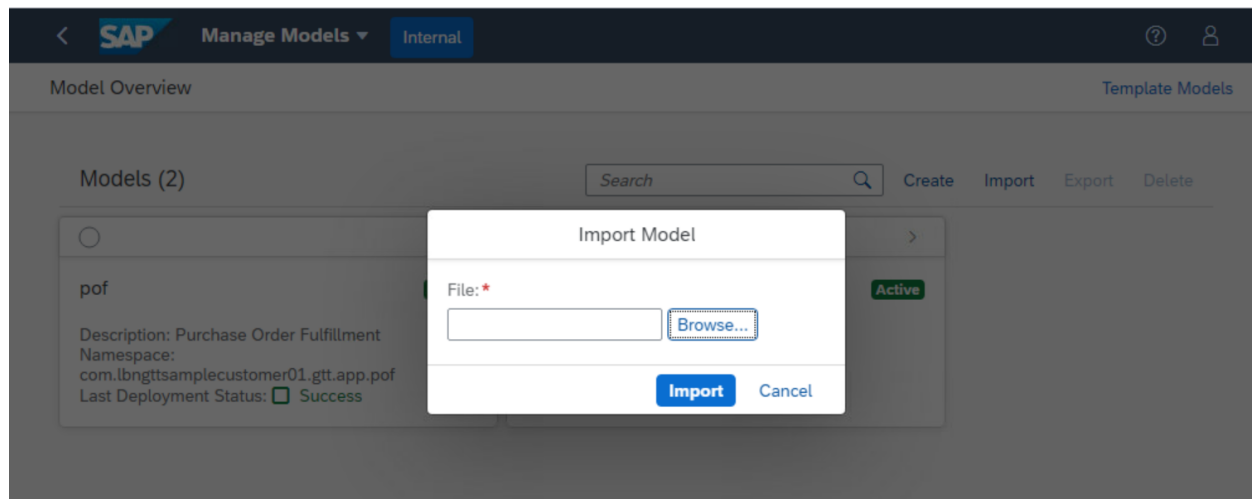
#### 4. Install Cloud Foundry Command Line Interface

<https://developers.sap.com/tutorials/cp-cf-download-cli.html>

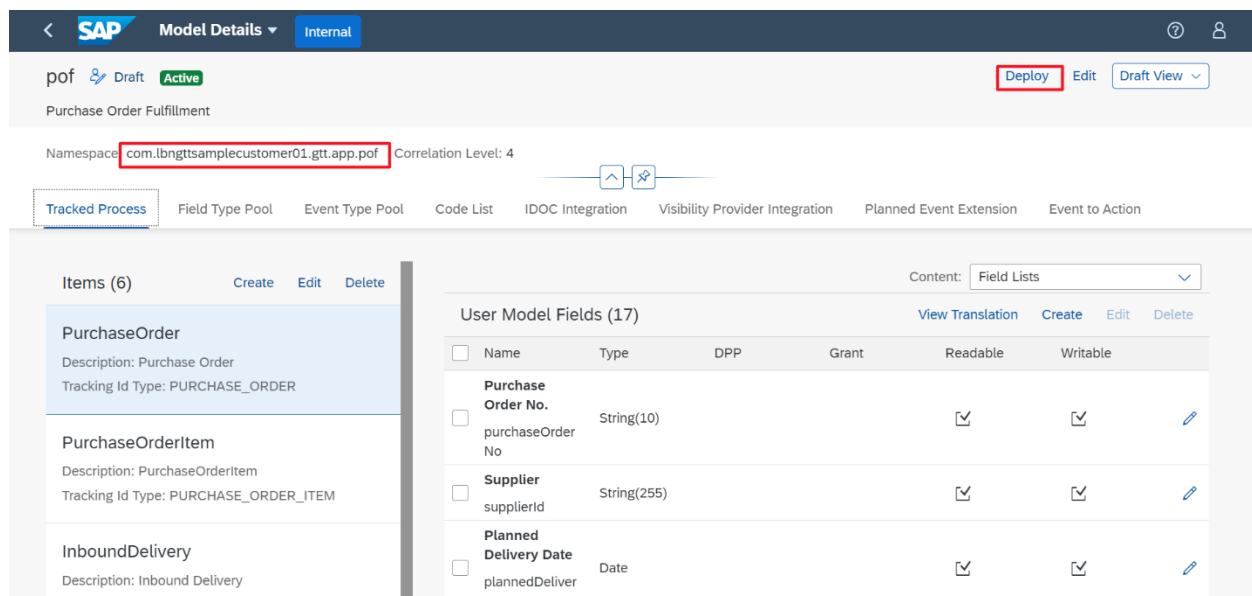
5. Install MultiApps CF CLI Plugin  
<https://github.com/cloudfoundry-incubator/multiapps-cli-plugin>
6. Install Cloud MTA Build Tool (MBT)  
<https://sap.github.io/cloud-mta-build-tool/download/>
7. Install MAKE  
<https://sap.github.io/cloud-mta-build-tool/makefile/>

## 2.3 Deploy Model

- Go to the folder *model* with downloaded source code. Make sure you have a JSON file *pof-model-YYYYMMDDxx.json* (e.g. *pof-model-2020121901.json*).
- Open *Manage Models* app on SAP Fiori Launchpad for the global track and trace option
- Click 'Import'
- Click 'Browse' to select the *pof-model-YYYYMMDDxx.json* file
- Click 'Import' to import the model



- Click 'Deploy'
- Record the model namespace for later reference, in this case, 'com.lbgnttsamplecustomer01.gtt.app.pof' in the following screenshot:



- Click 'Edit'
- Go to *IDOC Integration* tab

- Replace all the Application Object Type values with the ones you maintained in the ERP system

Model Details - Internal - Test

poF Active

Purchase Order Fulfillment

Namespace: com.lbngttsamples.gtt.app.pof Correlation Level: 4

Header Tracked Process Field Type Pool Event Type Pool Code List IDOC Integration Visibility Provider Integration Planned Event Extension Event to Action

Tracked Process: PurchaseOrder

Integration Switch: ON

Tracked Process Mapping

ERP Object Type: PurchaseOrderItem

Application Object Type: ZPOF\_GTT\_IN\_HD

Tracked Process / Events (1)

Name	IDOC	Event Code
PurchaseOrderEvent	E1EHPAO	

Field	IDOC Segment	IDOC Field
purchaseOrderNo	E1EHPCP	YN_PO_NUMBER
supplierId	E1EHPCP	YN_PO_SUPPLIER_ID
plannedDeliveryDate	E1EHPCP	YN_PO_DELIVERY_DATE
netValue	E1EHPCP	YN_PO_NET_VALUE
currency	E1EHPCP	YN_PO_CURRENCY
incotermsVersion	E1EHPCP	YN_PO_INCOTERMS_VERSION
incoterms	E1EHPCP	YN_PO_INCOTERMS
incotermsLocation	E1EHPCP	YN_PO_INCOTERMS_LOCATION
delayedValue		
receivingLocationId	E1EHPCP	YN_PO_RECEIVING_LOCATION
receivingLocationType	E1EHPCP	YN_PO_RECEIVING_LOC_TYPE
supplierDescription		
supplierLocationType	E1EHPCP	YN_PO_SUPPLIER_LOC_TYPE
receivingLocationDescription		
completionValue		

Save Cancel

- Go to *Event to Action* tab
- Replace all the namespace strings, in this case, 'com.lbngttsamplecustomer01.gtt.app.pof' in *Event to Action* script with the model namespace you recorded in the previous step
- Click 'Save' to save the model and then click 'Deploy' to deploy the model

Model Details - Internal

poF Draft Active

Purchase Order Fulfillment

Namespace: com.lbngttsamplecustomer01.gtt.app.pof Correlation Level: 4

Header Tracked Process Field Type Pool Event Type Pool Code List IDOC Integration Visibility Provider Integration Planned Event Extension Event to Action

Event to Action

Help Validate Code Open Validation Details

```

3  //?====> salesOrderGUID";
4  //?trackedProcess.id;
5  //?====> salesOrderNo";
6  //?trackedProcess.salesOrderNo;
7  //?====> ItemNo";
8  //?trackedProcess.itemNo;
9  //?====> businessTime";
10 //?actualEvent.actualBusinessTimestamp;
11 //?actualEvent.eventType;
12 //?====> trackedProcess";
13 //?trackedProcess;
14
15 var EXECUTION_STATUS_EVENT_FOR_SHIPMENT = "com.lbngttsamples.gtt.app.pof.Shipment.POD";
16
17 var obj = toObject("{}");
18 var needForward = false;
19
20
21 ?====> eventType";
22 ?actualEvent.eventType;
23 ?====> trackedProcess";
24 ?trackedProcess;
25
26 if (trackedProcess != null && "com.lbngttsamples.gtt.app.pof.PurchaseOrderItem.PurchaseOrderItem" == trackedProcess.trackedProcessType) {

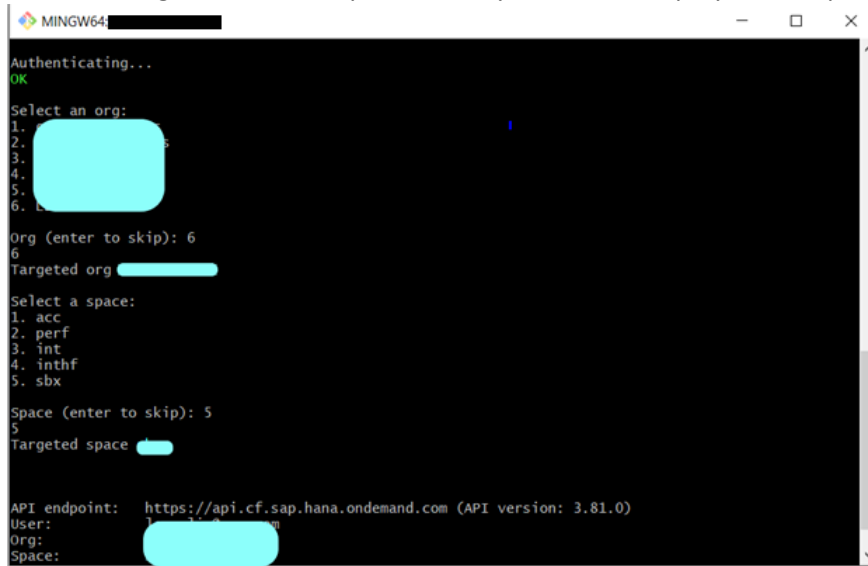
```

Save Cancel

## 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 where you want to deploy the template apps



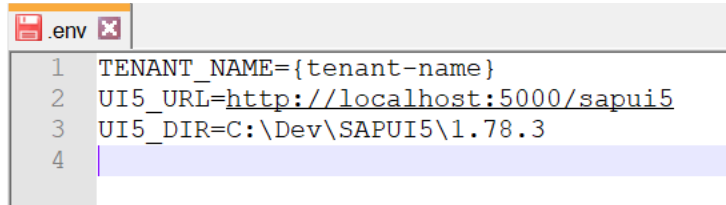
```
MINGW64 [redacted]
Authenticating...
OK
Select an org:
1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]
6. [redacted]
Org (enter to skip): 6
6
Targeted org [redacted]
Select a space:
1. acc
2. perf
3. int
4. inthf
5. sbx
Space (enter to skip): 5
5
Targeted space [redacted]

API endpoint: https://api.cf.sap.hana.ondemand.com (API version: 3.81.0)
User: [redacted]
Org: [redacted]
Space: [redacted]
```

## 2.4.2 Package and Deploy *Track PO Fulfillment* Frontend App

Go to GTT-V2-Sample-TrackPurchaseOrders-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 `'lbngttsamplecustomer01'` in `'com.lbngttsamplecustomer01.gtt.app.pof'` shown in [Step 2.3](#).



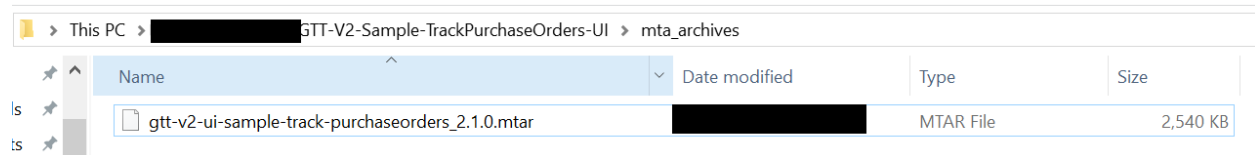
```
.env
1 TENANT_NAME={tenant-name}
2 UI5_URL=http://localhost:5000/sapui5
3 UI5_DIR=C:\Dev\SAPUI5\1.78.3
4
```

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-purchaseorders_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-purchaseorders\_xxx.mtar*

The deployment time depends on your network performance.

## 2.4.3 Package and Deploy SAP Fiori Launchpad for *Template Apps*

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
  - The maximum length of unique information should be no more than 16 characters
  - Must start with alphabetic character
  - No special characters like `-`, `/`, `&`
  - Must in lower case

```

1 ---
2 ID: lbn-gtt-sample-app-flp
3 _schema-version: "3.1"
4 parameters:
5   deploy_mode: html5-repo
6   enable-parallel-deployments: true
7   append: "${space}"
8   xsappname: tt_sof_${append}
9   version: 2.3.0
10 modules:
11   - name: lbn-gtt-sample-app-appRouter
12     type: approuter.nodejs
13     path: flp_appRouter
14     parameters:
15       disk-quota: 256M
16       memory: 256M
17     routes:
18       - route: lbn-gtt-samples-app-flp-{unique-identifier} ${domain}
19     properties:
20       SAP_JWT_TRUST_ACL:
21         - clientid: "*"
22         identityzone: "*"
23     destinations:
24       - name: lbn-gtt-sof-api
25 resources:
26   - name: lbn-gtt-sample-app-runtime
27     parameters:
28       service-plan: app-runtime
29       service: html5-apps-repo
30     type: org.cloudfoundry.managed-service
31   - name: lbn-gtt-sample-portal-resources
32     parameters:
33       service-plan: standard
34       service: portal
35     type: org.cloudfoundry.managed-service
36   - name: lbn-gtt-sof-api
37     properties:
38       url: https://gtt-sample-track-salesorders-service-{unique-identifier} ${default-domain}
39   - name: lbn-gtt-stt-api
40     properties:
41       url: https://gtt-sample-track-shipments-service-{unique-identifier} ${default-domain}
42   - name: lbn-gtt-pof-api
43     properties:
44       url: https://gtt-sample-track-purchaseorders-service-{unique-identifier} ${default-domain}
45   - name: lbn-gtt-sample-app-uaa
46     type: com.sap.xs.uaa-application
47     parameters:

```

This FLP project includes 3 template applications: Track SO Fulfillment, Track Shipments and Track PO Fulfillment. Before you build and deploy it, please deploy all the UI projects you need in advance. Otherwise, the deployment of this project will fail.

If you only need the Track PO Fulfillment app, make the following changes:

- Open the *mta.yaml* file
- Delete *lbn-gtt-sof-api* and *lbn-gtt-stt-api* in *lbn-gtt-sample-app-appRouter* and *resources* modules
- Delete *gtt-ui-sample-track-salesorders-app-host* and *gtt-ui-sample-track-shipments-app-host* in *flp* and *resources* modules



```

1  ---
2  ID: lbn-gtt-sample-app-flp
3  _schema-version: '3.1'
4  parameters:
5    deploy_mode: html5-repo
6    enable-parallel-deployments: true
7    append: "${space}"
8    xsappname: tt_sof_${append}
9  version: 2.3.0
10 modules:
11 - name: lbn-gtt-sample-app-appRouter
12   type: approuter.nodejs
13   path: flp_appRouter
14   parameters:
15     disk-quota: 256M
16     memory: 256M
17     routes:
18     - route: lbn-gtt-samples-app-flp-${space}.${domain}
19   properties:
20     SAP_JWT_TRUST_ACL:
21     - clientid: "*"
22       identityzone: "*"
23   destinations:
24   - name: lbn-gtt-sof-api
25     url: "~{lbn-gtt-sof-api/url}"
26     forwardAuthToken: true
27   - name: lbn-gtt-sst-api
28     url: "~{lbn-gtt-sst-api/url}"
29     forwardAuthToken: true
30   - name: lbn-gtt-pof-api
31     url: "~{lbn-gtt-pof-api/url}"
32     forwardAuthToken: true
33   requires:
34   - name: lbn-gtt-sample-app-uaa
35   - name: lbn-gtt-sample-app-runtime
36   - name: lbn-gtt-sample-portal-resources
37   - name: lbn-gtt-sof-api
38   - name: lbn-gtt-sst-api
39   - name: lbn-gtt-pof-api
40 - name: flp
41   type: com.sap.portal.content
42   path: flp
43   parameters:
44     stack: cflinuxfs3
45     memory: 128M
46     buildpack: https://github.com/cloudfoundry/nodejs-buildpack/releases/download/v1.6.39/nodejs-buildpack-cflinuxfs3-v1.6.39.zip
47   requires:
48   - name: lbn-gtt-sample-app-uaa
49   - name: lbn-gtt-sample-portal-resources
50   - name: gtt-ui-sample-track-salesorders-app-host
51   - name: gtt-ui-sample-track-shipments-app-host
52   - name: gtt-ui-sample-track-purchaseorders-app-host

```

```

53 resources:
54 - name: lbn-gtt-sample-app-runtime
55   parameters:
56     service-plan: app-runtime
57     service: html5-apps-repo
58   type: org.cloudfoundry.managed-service
59 - name: lbn-gtt-sample-portal-resources
60   parameters:
61     service-plan: standard
62     service: portal
63   type: org.cloudfoundry.managed-service
64 - name: lbn-gtt-sof-api
65   properties:
66     url: https://gtt-sample-track-salesorders-service-${space}.${default-domain}
67 - name: lbn-gtt-sst-api
68   properties:
69     url: https://gtt-sample-track-shipments-service-${space}.${default-domain}
70 - name: lbn-gtt-pof-api
71   properties:
72     url: https://gtt-sample-track-purchaseorders-service-${space}.${default-domain}
73 - name: lbn-gtt-sample-app-uaa
74   type: com.sap.xs.uaa-application
75   parameters:
76     config:
77       xsappname: "${xsappname}"
78       tenant-mode: dedicated
79       oauth2-configuration:
80         system-attributes:
81           - rolecollections
82       description: Security profile of sales order fulfillment application
83       scopes:
84         - name: "$XSAPPNAME.sof.r"
85           description: Allow to access sales order fulfillment application
86         - name: "$XSAPPNAME.pof.r"
87           description: Allow to access purchase order fulfillment application
88         - name: "$XSAPPNAME.sst.r"
89           description: Allow to access standalone shipment tracking application
90         - name: "$XSAPPNAME.sst.w"
91           description: Allow to report events in standalone shipment tracking application
92         - name: uaa.user
93           description: UAA
94       authorities:
95         - "$XSAPPNAME.sof.r"
96         - "$XSAPPNAME.pof.r"
97         - "$XSAPPNAME.sst.r"
98         - "$XSAPPNAME.sst.w"
99         - uaa.user

```

```

100     role-templates:
101       - name: SalesOrderFulfillmentAppUserDisplayTemplate
102         description: Track & Trace Sales Order Fulfillment Template App User Read Access
103         scope-references:
104           - "$XSAPPNAME.sof.r"
105           - uaa.user
106       - name: PurchaseOrderFulfillmentAppUserDisplayTemplate
107         description: Track & Trace Purchase Order Fulfillment Template App User Read Access
108         scope-references:
109           - "$XSAPPNAME.pof.r"
110           - uaa.user
111       - name: StandaloneShipmentTrackingAppUserDisplayTemplate
112         description: Track & Trace Standalone Shipment Tracking Template App User Read Access
113         scope-references:
114           - "$XSAPPNAME.sst.r"
115           - uaa.user
116       - name: StandaloneShipmentTrackingAppUserProcessTemplate
117         description: Track & Trace Standalone Shipment Tracking Template App User Write Access
118         scope-references:
119           - "$XSAPPNAME.sst.w"
120           - uaa.user
121       - name: gtt-ui-sample-track-salesorders-app-host
122         type: org.cloudfoundry.existing-service
123       - name: gtt-ui-sample-track-shipments-app-host
124         type: org.cloudfoundry.existing-service
125       - name: gtt-ui-sample-track-purchaseorders-app-host
126         type: org.cloudfoundry.existing-service
127       - name: lbn-gtt-sample-destination
128         type: org.cloudfoundry.managed-service
129       parameters:
130         service-plan: lite
131         service: destination

```

- Open the *flp/portal-site/CommonDataModel.json* file
- Delete viz items *com.sap.gtt.app.sample.sst* and *com.sap.gtt.app.sample.sof* in *payload/catalogs/payload/viz* array
- Delete groups of sales Order and shipments in *payload/groups* array
- Delete groups of sales Order and shipments in *payload/sites/payload/groupsOrder* array

```

1  {
2    "_version": "3.0.0",
3    "identification": {
4      "id": "ee7d30df-c86c-48b1-8f02-c2abc4e18f54-1578021444073",
5      "entityType": "bundle"
6    },
7    "payload": {
8      "catalogs": [
9        {
10         "_version": "3.0.0",
11         "identification": {
12           "id": "defaultCatalogId",
13           "title": "{{title}}",
14           "entityType": "catalog",
15           "i18n": "i18n/defaultCatalogId.properties"
16         },
17         "payload": {
18           "viz": [
19             {
20               "id": "com.sap.gtt.app.sample.sof",
21               "vizId": "SalesOrder-track"
22             },
23             {
24               "id": "com.sap.gtt.app.sample.sst",
25               "vizId": "Shipment-track"
26             },
27             {
28               "id": "com.sap.gtt.app.sample.pof",
29               "vizId": "PurchaseOrder-track"
30             }
31           ]
32         }
33       }
34     ],

```

```

35     "groups": [
36     {
37         "_version": "3.0.0",
38         "identification": {
39             "id": "salesOrder",
40             "title": "{{title}}",
41             "entityType": "group",
42             "i18n": "i18n/salesOrder.properties"
43         },
44         "payload": {
45             "viz": [
46                 {
47                     "id": "com.sap.gtt.app.sample.sof",
48                     "appId": "com.sap.gtt.app.sample.sof",
49                     "vizId": "SalesOrder-track"
50                 }
51             ]
52         }
53     },
54     {
55         "_version": "3.0.0",
56         "identification": {
57             "id": "shipment",
58             "title": "{{title}}",
59             "entityType": "group",
60             "i18n": "i18n/shipment.properties"
61         },
62         "payload": {
63             "viz": [
64                 {
65                     "id": "com.sap.gtt.app.sample.sst",
66                     "appId": "com.sap.gtt.app.sample.sst",
67                     "vizId": "Shipment-track"
68                 }
69             ]
70         }
71     },
72     {
73         "_version": "3.0.0",
74         "identification": {
75             "id": "purchaseOrder",
76             "title": "{{title}}",
77             "entityType": "group",
78             "i18n": "i18n/purchaseOrder.properties"
79         },
80         "payload": {
81             "viz": [
82                 {
83                     "id": "com.sap.gtt.app.sample.pof",
84                     "appId": "com.sap.gtt.app.sample.pof",
85                     "vizId": "PurchaseOrder-track"
86                 }
87             ]

```

```

91     "sites": [
92       {
93         "_version": "3.0.0",
94         "identification": {
95           "id": "a3eee102-5181-4222-9924-8b8e90985f07-1578021444073",
96           "entityType": "site",
97           "title": "SAP Fiori launchpad site on Cloud Foundry",
98           "description": "SAP Fiori launchpad site on Cloud Foundry, deployed from SAP Web IDE"
99         },
100        "payload": {
101          "config": {
102            "ushellConfig": {
103              "renderers": {
104                "fiori2": {
105                  "componentData": {
106                    "config": {
107                      "applications": {
108                        "Shell-home": {}
109                      },
110                      "enableHelp": false,
111                      "enableSearch": false,
112                      "sessionTimeoutIntervalInMinutes": 19,
113                      "sessionTimeoutReminderInMinutes": 3
114                    }
115                  }
116                }
117              }
118            },
119            "groupsOrder": [
120              "salesOrder",
121              "shipment",
122              "purchaseOrder"
123            ],
124

```

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 Track PO Fulfillment Backend Service

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

- Obtain a Here Map license from [Step 4.1](#)
- Open the file `mta.yaml` under the folder 'GTT-V2-Sample-TrackPurchaseOrders-Service':

```
_schema-version: '3.1'
ID: gtt-v2-sample-track-purchaseorders-service
version: 2.3.0
modules:
- name: gtt-sample-track-purchaseorders-service
  type: java
  path: srv/
  properties:
    SPRING_PROFILES_ACTIVE: cloud
    DESTINATION_GTT: att_core_engine_flp_base_url
    HERE_MAP_KEY: {HERE_MAP_KEY}
  parameters:
    buildpack: java_buildpack
    health-check-timeout: 180
    host: gtt-sample-track-purchaseorders-service-{unique-identifier}
  build-parameters:
    ignore:
      - "*.md"
    build-result: target/*.jar
    timeout: 10m
  requires:
    - name: lbn-gtt-sample-app-uaa
    - name: lbn-gtt-sample-destination
resources:
- name: lbn-gtt-sample-app-uaa
  type: org.cloudfoundry.existing-service
- name: lbn-gtt-sample-destination
  type: org.cloudfoundry.existing-service
```

- Replace {here-map-key} with your license key
- 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/pof/constant/Constants.java`
  - Replace 'com.lbngttsamples.gtt.app.pof' with the model namespace you got from [Step 2.3](#)

```
package com.sap.gtt.v2.sample.pof.constant;

public class Constants {
    public static final String GTT_MODEL_NAMESPACE = "com.lbngttsamples.gtt.app.pof";
    public static final String GTT_MODEL_NAMESPACE_WRITE_SERVICE = GTT_MODEL_NAMESPACE + ".pofWriteService";
    public static final String MODEL_NAMESPACE = GTT_MODEL_NAMESPACE + ".pofService";
}
```

- Open file `./srv/pom.xml`

Change line 24, 25  
from

```
<spring-boot-starter.version>2.4.0</spring-boot-starter.version>
<spring-security.version>5.5.0-M1</spring-security.version>
```

to

```
<spring-boot-starter.version>2.4.3</spring-boot-starter.version>  
<spring-security.version>5.5.0</spring-security.version>
```

- Run the following command to build the MTAR package:

```
mbt build
```

A MTAR file *./mta\_archives/gtt-v2-sample-track-purchaseorders-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-purchaseorders-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.

The screenshot shows the SAP Cloud Platform Cockpit interface. On the left is a navigation menu with options: Applications, Services, SAP HANA Cloud, SAP HANA Cloud Migrations, SAP HANA, Portal, Routes, Security Groups, Events, Members, Useful Links, and Legal Information. The main area displays 'Space: [redacted] - Applications' with 'All: 4' applications. A 'Deploy Application' button and a search bar are at the top. Below is a table of applications:

Requested State	Name	Instances	Disk Quota	Memory	Actions
Stopped	flp	0/1	1024 MB	128 MB	[Play] [Stop] [Trash]
Started	gtt-sample-track-purchaseorders-service	1/1	1024 MB	1024 MB	[Play] [Stop] [Trash]
Started	gtt-ui-sample-track-purchaseorders-ui_deployment	1/1	1024 MB	256 MB	[Play] [Stop] [Trash]
Started	lbn-gtt-sample-app-router	1/1	256 MB	256 MB	[Play] [Stop] [Trash]

## 2.4.6 Maintain Destination of Forwarding URL

### 1. Obtain the UAA Token

- Go to the *Track PO Fulfillment* backend application that you have deployed

This block shows a partial view of the application list from the previous screenshot, specifically the row for 'gtt-sample-track-purchaseorders-service'.

Started	gtt-sample-track-purchaseorders-service	1/1	1024 MB	1024 MB	[Play] [Stop] [Trash]
---------	-----------------------------------------	-----	---------	---------	-----------------------

- Find the environment of UAA

- Copy the value of **clientid** and **clientsecret**

SAP Cloud Platform Cockpit

Application: gtt-sample-track-purchaseorders-service - Service Bindings

All: 2

[Bind Service](#)

Name	Service	Plan	Actions
<input checked="" type="radio"/> lbr-gtt-sample-app-uaa	xsuaa	application	
<input type="radio"/> lbr-gtt-sample-destination	destination	lite	

[Hide sensitive data](#)

```
{
  "tenantmode": "dedicated",
  "sburl": "https://api.authentication.eu10.hana.ondemand.com",
  "subaccountid": "XXXXXXXXXXXXXXXXXXXX",
  "clientid": "XXXXXXXXXXXXXXXXXXXX",
  "xsappname": "XXXXXXXXXXXXXXXXXXXX",
  "clientsecret": "XXXXXXXXXXXXXXXXXXXX",
  "url": "https://api.authentication.eu10.hana.ondemand.com",
  "uaadomain": "authentication.eu10.hana.ondemand.com",
  "apiurl": "https://api.authentication.eu10.hana.ondemand.com",
  "identityzone": "XXXXXXXXXXXXXXXXXXXX",
  "identityzoneid": "XXXXXXXXXXXXXXXXXXXX",
  "tenantid": "XXXXXXXXXXXXXXXXXXXX",
  "zoneid": "XXXXXXXXXXXXXXXXXXXX"
}
```

2. Go to 'Destinations'

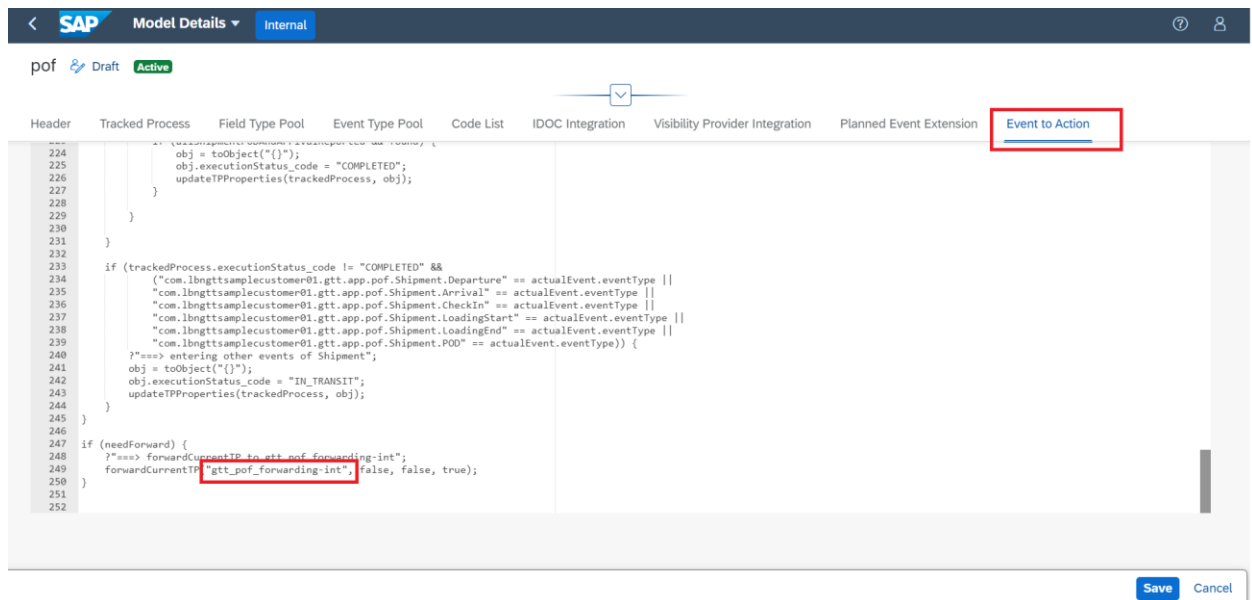
SAP Cloud Platform

- Overview
- Services
  - Service Marketplace
  - Service Instances
- Subscriptions
- Cloud Foundry
  - Spaces
  - Quota Plans
  - Org Members
- HTML5 Applications
- Connectivity
  - Destinations**
  - Cloud Connectors
- Security
  - Administrators
  - Role Collections
  - Roles
  - Trust Configuration
- Entitlements
- Usage Analytics

### 3. Configure Destination of Event to Action Forwarding

Name	e.g. gtt_pof_forwarding_int
Type	HTTP
Description	<optional>
URL	e.g. <a href="https://gtt-sample-track-purchaseorders-service.cfapps.eu10.hana.ondemand.com/sap/logistics/gtt/sample/pof/rest/v1/forward">https://gtt-sample-track-purchaseorders-service.cfapps.eu10.hana.ondemand.com/sap/logistics/gtt/sample/pof/rest/v1/forward</a>
Proxy Type	Internet
Authentication	OAuth2ClientCredentials
Client ID	Copied in the previous step
Client Secret	Copied in the previous step
Token Service URL	e.g. <a href="https://lbn-gtt-samples.authentication.eu10.hana.ondemand.com/oauth/token">https://lbn-gtt-samples.authentication.eu10.hana.ondemand.com/oauth/token</a>

Note: You need to update the destination name in *Event to Action* script of *Track PO Fulfillment* model if you change the name from 'gtt\_pof\_forwarding\_int' to others.



### 2.4.7 Maintain Roles and Users

- As shown in [Step 1.2](#), go to the role of 'gtt-sample-all', and add the following role:

Role	Application
PurchaseOrderFulfillmentAppUserDisplayTemplate	tt_pof_{space}

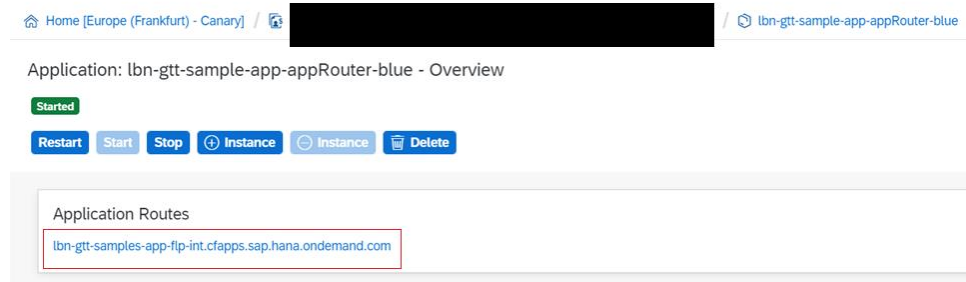
Note that the role of 'PurchaseOrderFulfillmentAppUser' is used to access the *Track PO Fulfillment* app.

If you need to access other template applications such as *Track Shipments* or *Track SO Fulfillment*, add the following roles:

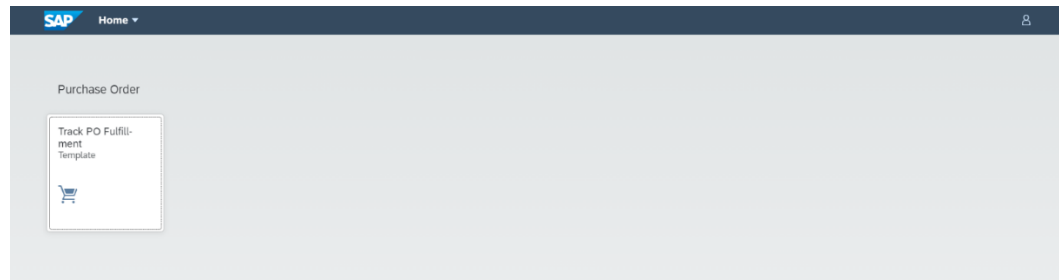
Role	Application
StandaloneShipmentTrackingAppUserDisplayTemplate	tt_sst_{space}
StandaloneShipmentTrackingAppUserProcessTemplate	tt_sof_{space}
SalesOrderFulfillmentAppUserDisplayTemplate	tt_sof_{space}

#### 2.4.8 Open *Track PO 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 *Track PO Fulfillment*



- Open the *Track PO Fulfillment* template app

Purchase Order No.:  Supplier:  Receiving Location:  Planned Delivery Date:  Material ID:  Material Description:  Shipment Number:

Inbound Delivery No.:

Adapt Filters **Go**

Purchase Orders (2) Purchase Order Items (2)

Purchase Order No.	Supplier	Receiving Location	Planned Delivery Date	Net Value	Completion Rate	Incoterms
9900029829	VEN_CO	0001	Oct 19, 2020	110000.00 INR	0.00 %	Costs and freight
9900066187	VEN_CO	0001	Oct 19, 2020	110000.00 INR	72.00 %	Costs and freight

### 3. Implement ERP Extractor

For ERP extractor implementation, refer to the following document:

02\_Extractor\_Creation\_Guide-TPOF.pdf

## 4. Other Configuration

### 4.1 Obtain A Here Map License

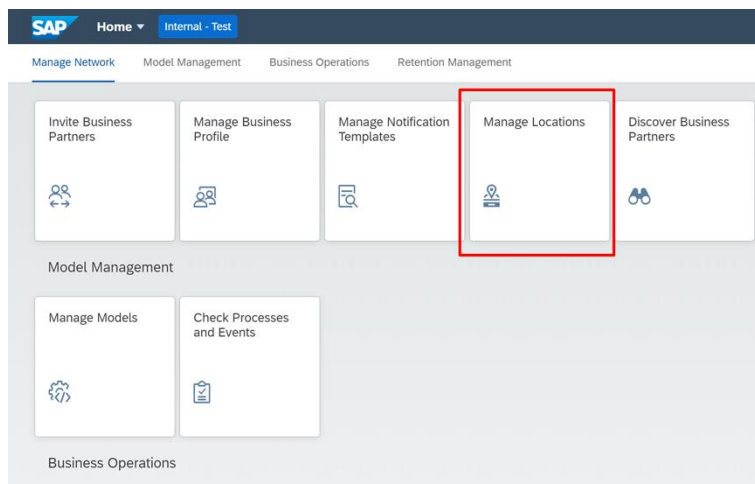
To have the map view, log the incident with the URL of Fiori Launchpad of template apps in SAP BCP system under component 'SCM-LBN-GTT-APP'. Then follow the SAP Note 1773689: <https://launchpad.support.sap.com/#/notes/0001773689> to add logon credentials to the secure area so that we can provide you with the key in a safe way. After you get the key, you can use it in [Step 2.4.4](#) when deploying the backend service.

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 the *Manage Locations* app.

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



## 2. Click 'Create' to create a new location

The screenshot shows the SAP Locations table interface. At the top, there are filters for Location ID, Object Type, Description, Country/Region, and City. Below the filters, a table lists existing locations. The 'Create' button is highlighted with a red box in the top right corner of the table area.

Location ID	Description	Object Type	Country/Region	State	City	District	Street	House Number
QM7CLNT910-NL-HARBOR	NL Harbor	Logistic Location	Netherlands (the)		Leiden			
Changed On: Sep 8, 2020, 5:30:41 PM External ID: NL-HARBOR Source System: QM7CLNT910								
QM7CLNT910-MX91	CATT VZ MX91	Supplier	Germany		Herten			
Changed On: Sep 8, 2020, 5:29:24 PM External ID: MX91 Source System: QM7CLNT910								

## 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.

For details, refer to the following document:

02\_Extractor\_Creation\_Guide-TPOF.pdf

The screenshot shows the 'Create Location' form in SAP. The 'GENERAL' tab is selected. The 'Object Type' is set to 'Logistic Location'. The 'Source System' and 'External ID' fields are visible. The 'Description' field is empty. The 'Time Zone' is set to 'UTC+01:00'. The 'Longitude' and 'Latitude' fields are highlighted with a red box, showing the format 'Example: 000.00000000'.

Object Type: \*  
Logistic Location

Source System/External ID: \*  
Source System: External ID

Description: \*

Time Zone: \*  
UTC+01:00

Longitude: \*  
+ (East) Example: 000.00000000

Latitude: \*  
+ (North) Example: 00.00000000

Country/Region: \*  
State: \*  
City: \*  
District: \*  
Street/House Number: \*  
Zip Code: \*

## 4.3 Maintain Data Contributors

To receive actual events from other business partners, you need to invite them to join your business network. For more, search for *Administration Guide for Version 2* at [help.sap.com/gtt](https://help.sap.com/gtt) and see the chapter 'Onboarding and User Management (Data Contributors)'.