

# Implementation Guide

## – *Track Shipments* Template App

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## 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.

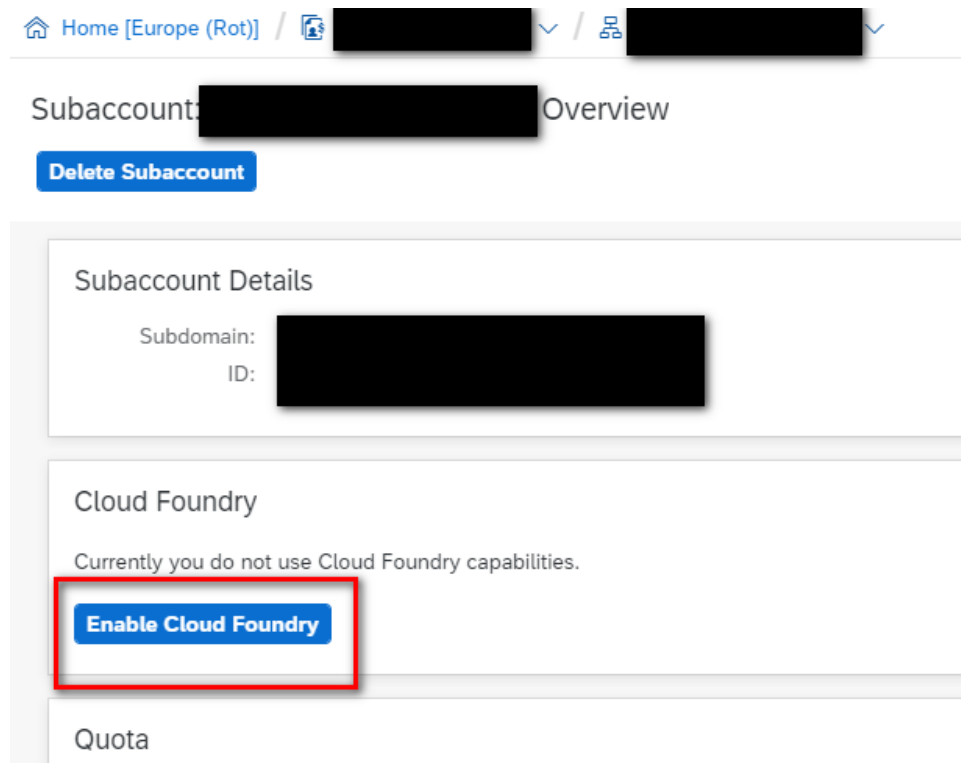
## 0.Prerequisites

- 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 providers, log your incident in SAP BCP system with component “SCM-LBN-GTT-COR”

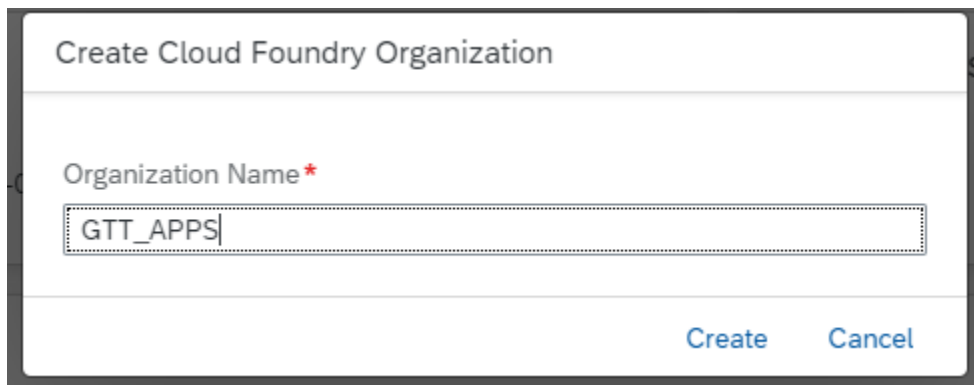
## 1.Environment Configuration in Logistics Business Network, Global Track and Trace Option

### 1.1 Enable Cloud Foundry and Create Space

1. Click “Enable Cloud Foundry” to enable the development landscape

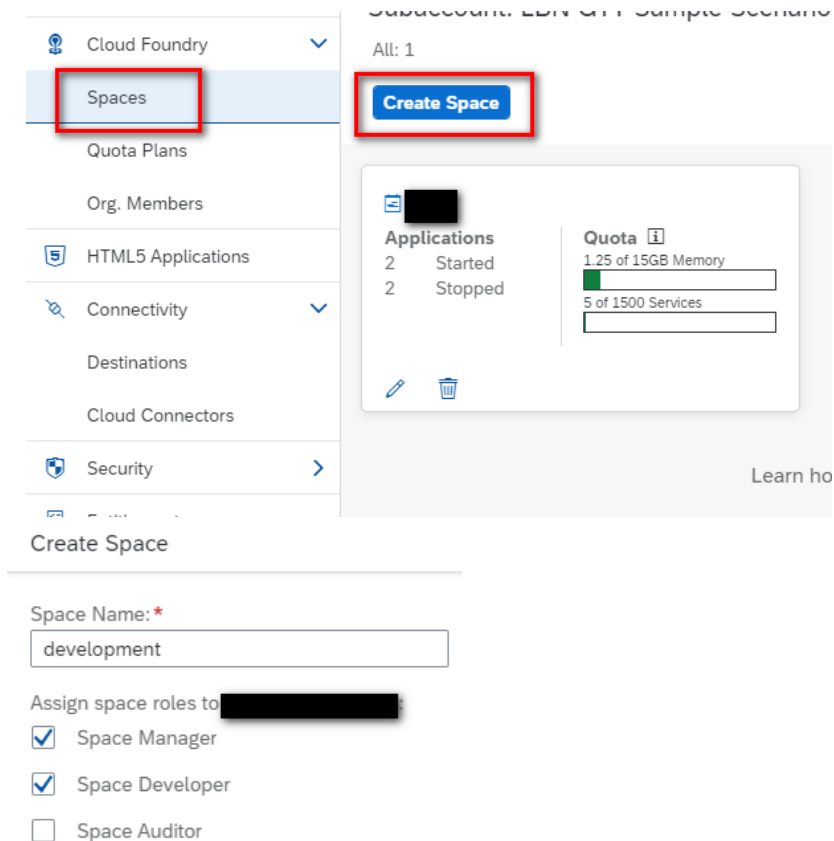


2. Fill in the Organization Name and click "Create"



The image shows a dialog box titled "Create Cloud Foundry Organization". It has a text input field for "Organization Name" with a red asterisk indicating it is required. The text "GTT\_APPS" is entered into the field. At the bottom right, there are two buttons: "Create" and "Cancel".

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



The image shows the Cloud Foundry Spaces management interface. On the left, a sidebar menu has "Spaces" highlighted with a red box. In the main area, a "Create Space" button is also highlighted with a red box. Below this, a card displays details for a space named "development":

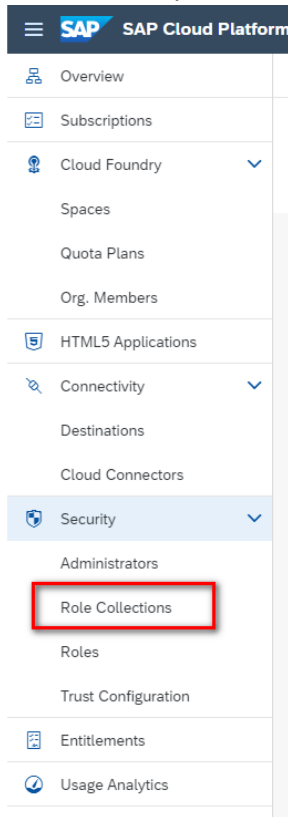
- Applications:** 2 Started, 2 Stopped
- Quota:** 1.25 of 15GB Memory, 5 of 1500 Services

Below the card, there is a "Create Space" section with the following fields and options:

- Space Name:** \* development
- Assign space roles to:** [redacted]
- ☒ Space Manager
- ☒ Space Developer
- ☐ Space Auditor

## 1.2 Maintain Roles and Users

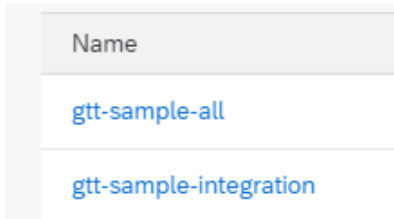
1. Go to “Security” -> “Role Collections”



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 the *Track Shipments* template app.
- Role template “gtt-sample-integration” is granted to technical users who only have access to the global track and trace APIs for development purpose.

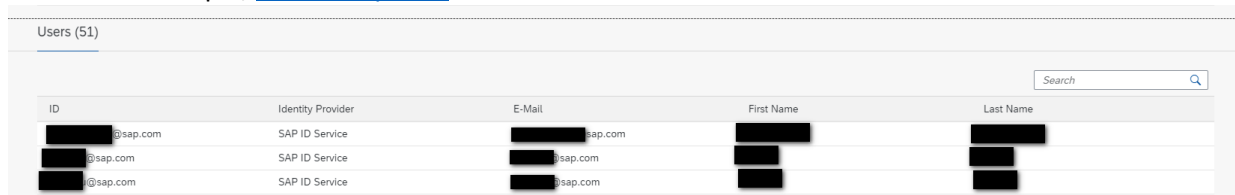
3. Go to the role of “gtt-sample-all”, and add the following roles:

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 the global track and trace option and the *Track Shipments* template app.

IT Administrator needs to maintain application users in the identity provider.

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



The screenshot shows the 'Users (51)' page in the SAP Identity Provider. It features a search bar and a table with columns for ID, Identity Provider, E-Mail, First Name, and Last Name. The table contains three rows of user data, with some fields redacted by black boxes.

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

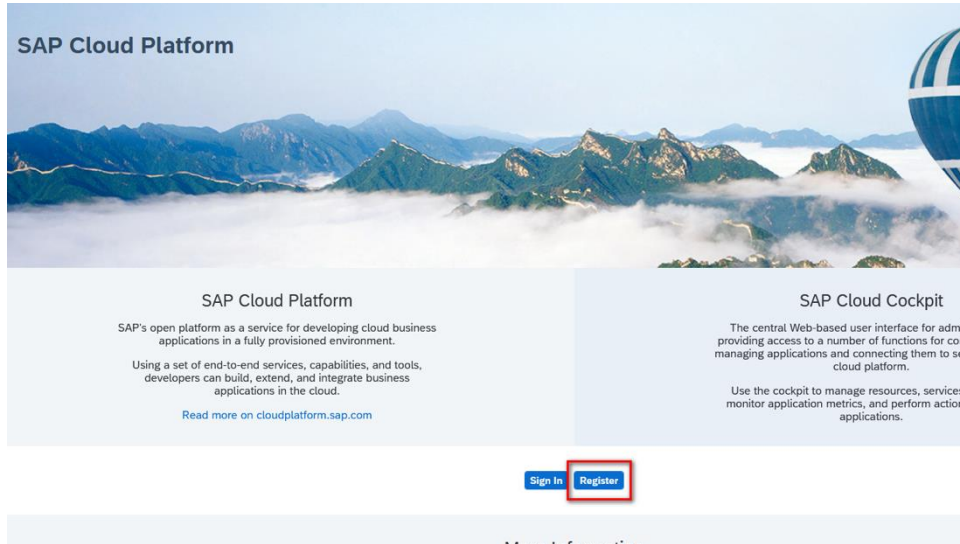
Note: The application user in this step should be different from the technical user created in [Step 1.3](#).

## 1.3 Maintain Technical User

1. Go to 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

<input type="text" value="E-mail address *"/>	<input type="text" value="First name *"/>
<input type="text" value="Last name *"/>	<input type="text" value="Company *"/>
<input type="text" value="Country/Region"/> United States	<input type="text" value="Phone"/> +1 XXX-XXX-XXXX
<input type="text" value="Department *"/>	<input type="text" value="Relationship to SAP *"/>
<input type="text" value="Create password *"/>	<input type="text" value="Confirm password *"/>

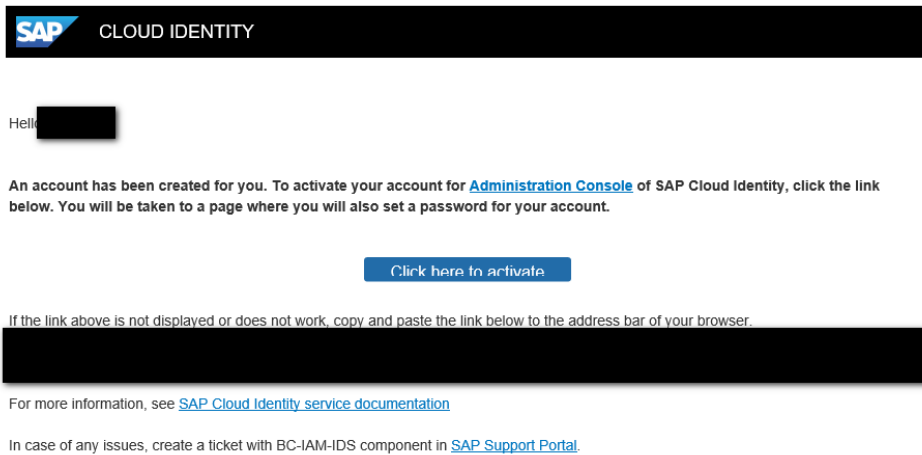
Must have at least 8 characters.

☐ 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.

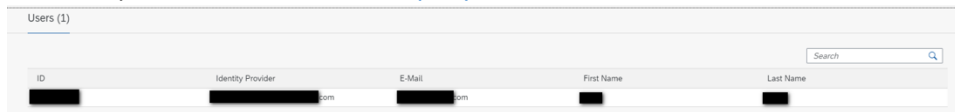
3. Go to the mail inbox to activate the account



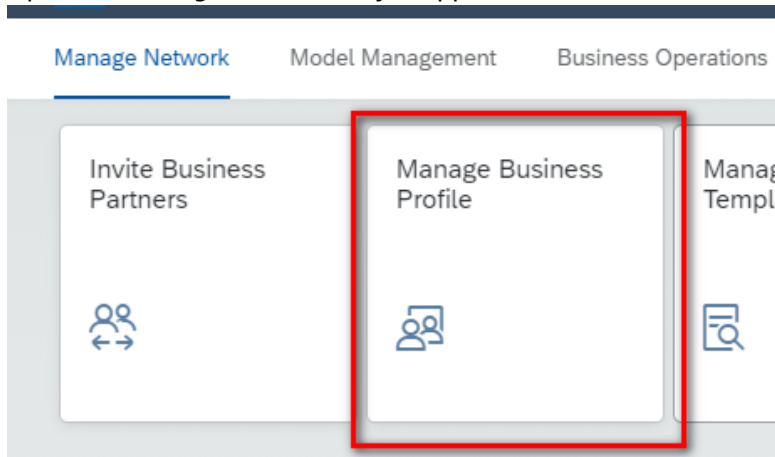
4. As shown in [Step 1.2](#), go to the role of "gtt-sample-integration", and add the following roles:

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

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



6. Go to SAP Fiori Launchpad for the global track and trace option.  
Open the *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]

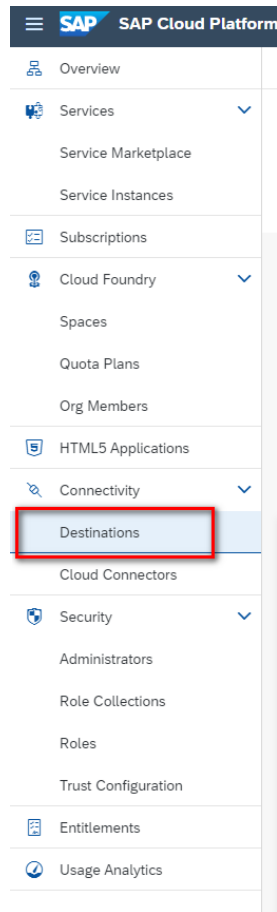
  

Alternate Identifiers (1)	
Identifier Type	ID
Technical User	[REDACTED].com

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

- Go to “Destinations”



- Configure Destination of GTT Core Engine Base URL

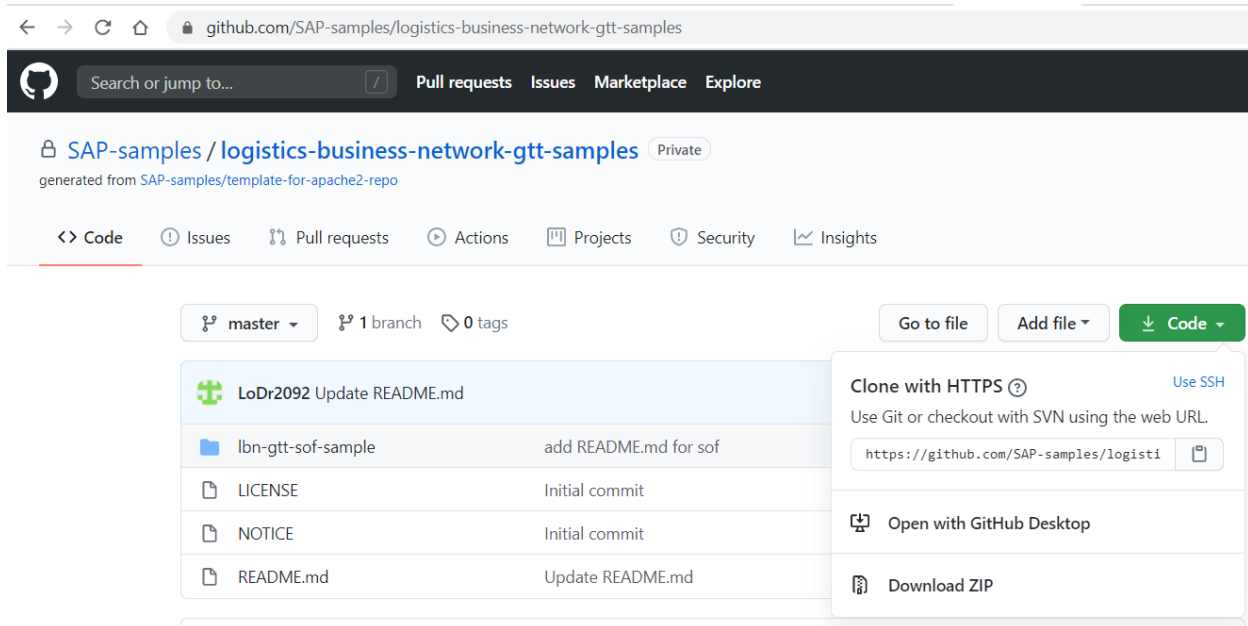
Name	gtt_core_engine_flp_base_url
Type	HTTP
Description	<optional>
URL	e.g. <a href="https://lbn-gtt-samples.gtt-flp-lbnplatform.cfapps.eu10.hana.ondemand.com/api">https://lbn-gtt-samples.gtt-flp-lbnplatform.cfapps.eu10.hana.ondemand.com/api</a>
Proxy Type	Internet
Authentication	BasicAuthentication
User	User from <a href="#">Step 1.3</a>
Password	Password from Step 1.3

## 2. Implement *Track Shipments* 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.

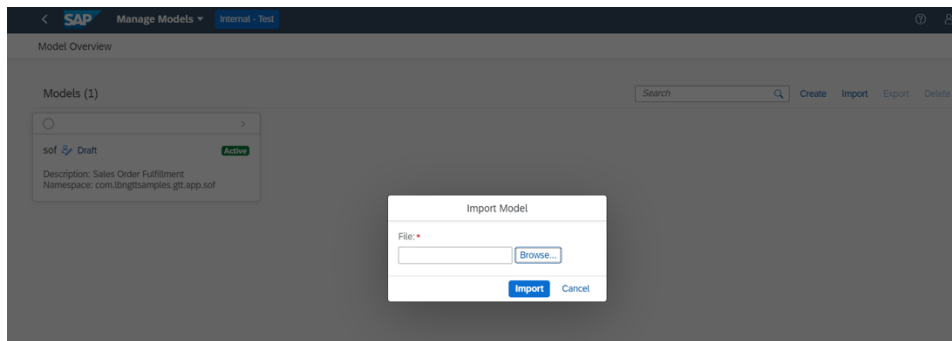


### 2.2 Download and Setup Tools

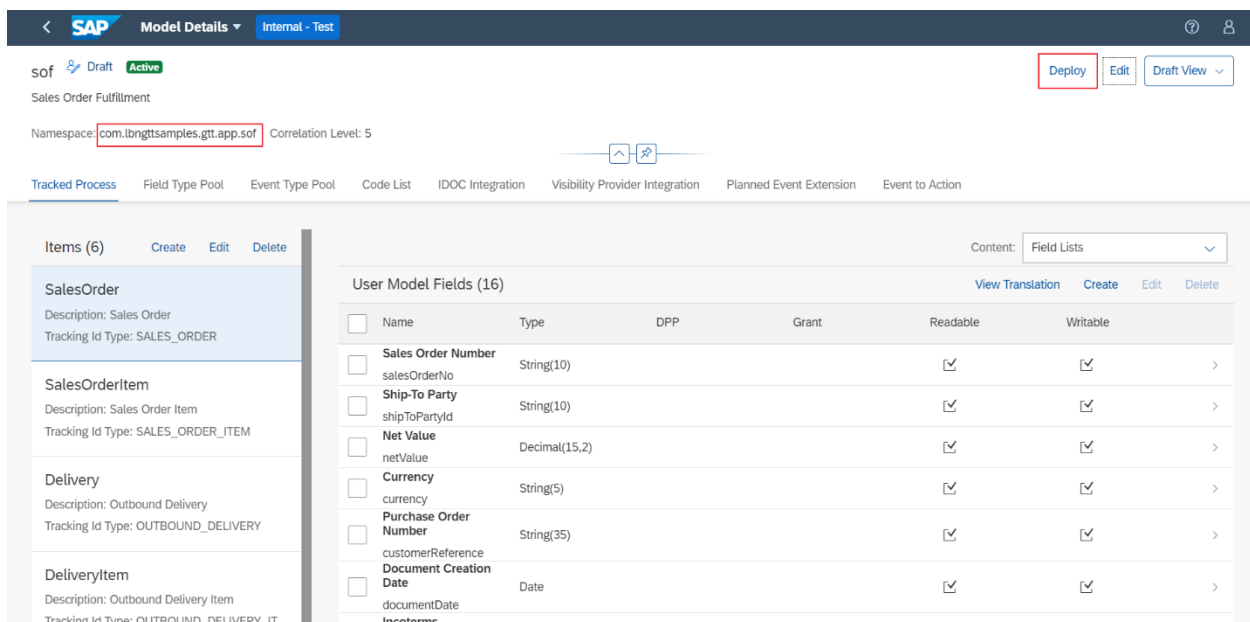
1. Install JDK 8 and Maven
2. Install NPM, Node JS, and grunt-cli  
<https://www.saplearners.com/how-to-install-node-js-and-npm/>  
Run the following command after NPM is installed:  
`npm config set @sap:registry "https://npm.sap.com" -g`
3. Install Cloud Foundry Command Line Interface  
<https://developers.sap.com/tutorials/cp-cf-download-cli.html>
4. Install MultiApps CF CLI Plugin  
<https://github.com/cloudfoundry-incubator/multiapps-cli-plugin>
5. 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

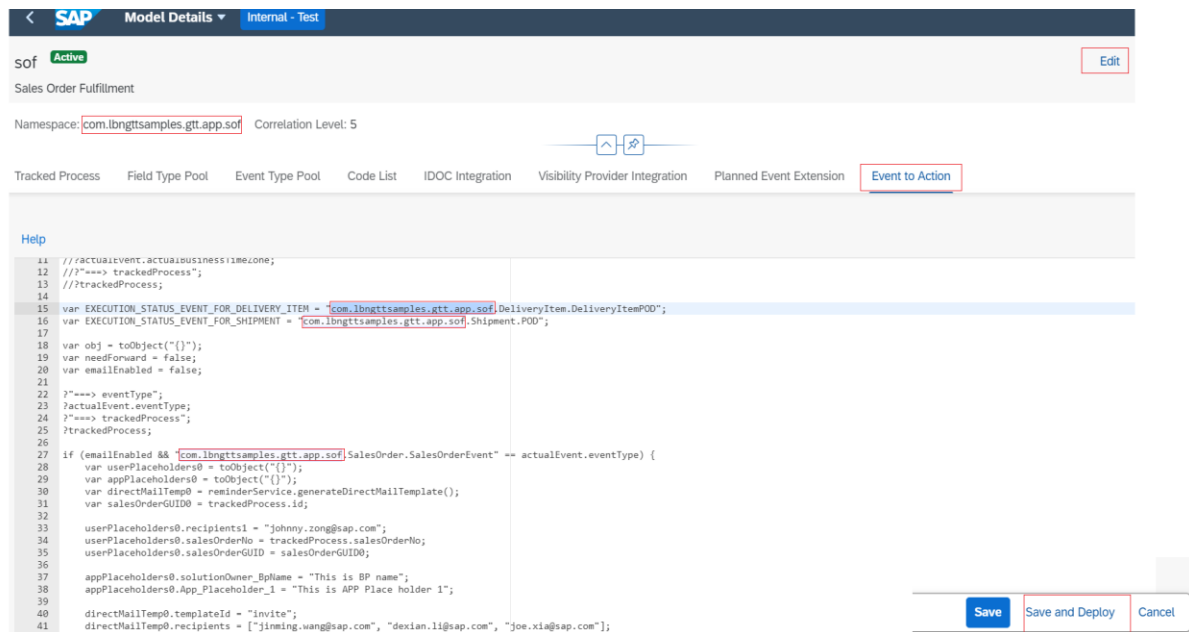
- Go to the folder *model* with downloaded source code. Make sure you have a JSON file *sof-model-YYYYMMDDxx.json* (e.g. *sof-model-2020091001.json*).
- Open the *Manage Models* app on SAP Fiori Launchpad for the global track and trace option
- Click “Import”
- Click “Browse” to select the *sof-model-YYYYMMDDxx.json*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



- Click “Deploy”
- Note down the model namespace for later use, in this case, “com.lbngttsamples.gtt.app.sof” as shown below



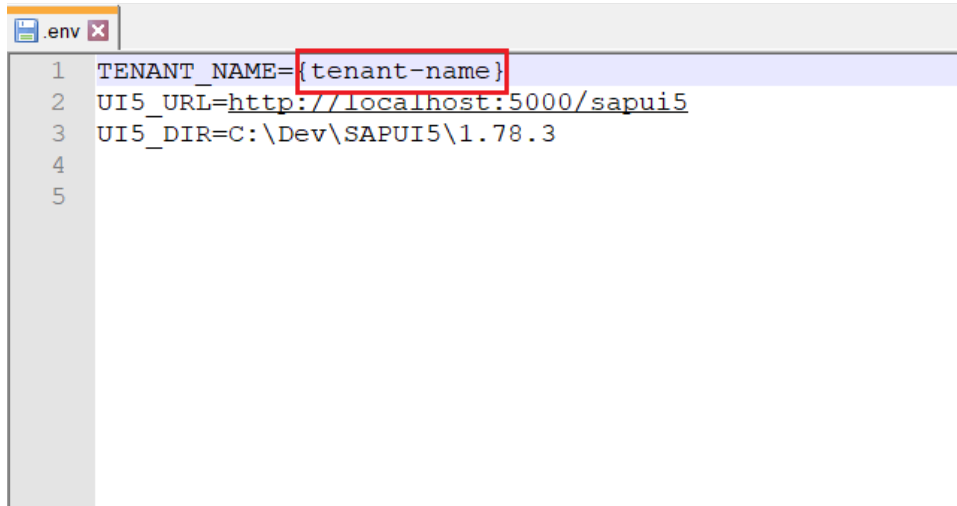
- Click “Edit”
- Go to *Event to Action* tab
- Replace all the namespace strings, in this case, “com.lbngttsamples.gtt.app.sof” in the *Event to Action* script with the model namespace you noted down in the previous step
- Click “Save and Deploy” to deploy the model



### 2.4.2 Package and Deploy *Track Shipments* Frontend App

Go to GTT-V2-Sample-TrackShipments-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” as shown in Step 2.3.



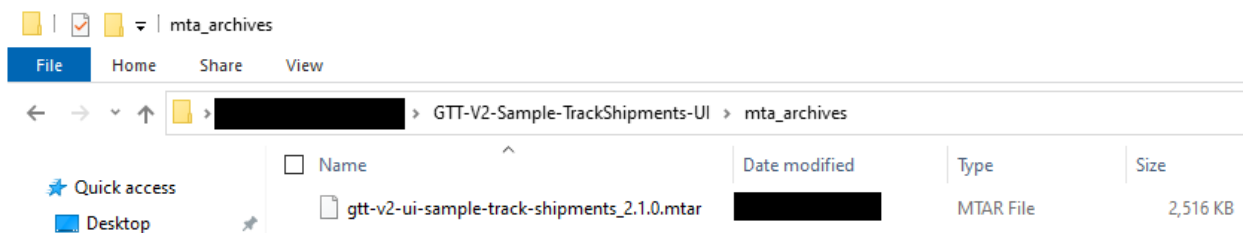
```
1 TENANT_NAME={tenant-name}
2 UI5_URL=http://localhost:5000/sapui5
3 UI5_DIR=C:\Dev\SAPUI5\1.78.3
4
5
```

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-shipments_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-shipments_xxx.mtar
```

The deployment time depends on your network conditions.

### 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

```
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-ani
```

```

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:
    service-plan: standard
    service: portal
    type: org.cloudfoundry.managed-service
- name: lbn-gtt-sof-api
  properties:
    url: https://gtt-sample-track-salesorders-service-{unique-identifier}.$(default-domain)
- name: lbn-gtt-sst-api
  properties:
    url: https://gtt-sample-track-shipments-service-{unique-identifier}.$(default-domain)
- name: lbn-gtt-pof-api
  properties:
    url: https://gtt-sample-track-purchaseorders-service-{unique-identifier}.$(default-domain)
- name: lbn-gtt-sample-app-uaa
  type: com.sap.xs.uaa-application
  parameters:

```

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

If you only need the *Track Shipments* template app, make the following changes:

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



```

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         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-{unique-identifier}.${default-domain}
67   - name: lbn-gtt-sst-api
68     properties:
69       url: https://gtt-sample-track-shipments-service-{unique-identifier}.${default-domain}
70   - name: lbn-gtt-pof-api
71     properties:
72       url: https://gtt-sample-track-purchaseorders-service-{unique-identifier}.${default-domain}
73   - name: lbn-gtt-sample-app-uaa
74     type: com.sap.xs.uaa-application
75     parameters:
76       config:
77         xsappname: "${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

```

```

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.sof* and *com.sap.gtt.app.sample.pof* in *payload/catalogs/payload/viz* array
- Delete groups *salesOrder* and *purchaseOrder* in *payload/groups* array
- Delete orders *salesOrder* and *purchaseOrder* 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",
  "identification": {
    "id": "shipment",
    "title": "{{title}}",
    "entityType": "group",
    "i18n": "i18n/shipment.properties"
  },
  "payload": {
    "viz": [
      {
        "id": "com.sap.gtt.app.sample.sst",
        "appId": "com.sap.gtt.app.sample.sst",
        "vizId": "Shipment-track"
      }
    ]
  }
},
{
  "_version": "3.0.0",
  "identification": {
    "id": "purchaseOrder",
    "title": "{{title}}",
    "entityType": "group",
    "i18n": "i18n/purchaseOrder.properties"
  },
  "payload": {
    "viz": [
      {
        "id": "com.sap.gtt.app.sample.pof",
        "appId": "com.sap.gtt.app.sample.pof",
        "vizId": "PurchaseOrder-track"
      }
    ]
  }
},
"sites": [
  {
    "_version": "3.0.0",
    "identification": {
      "id": "a3eee102-5181-4222-9924-8b8e90985f07-1578021444073",
      "entityType": "site",
      "title": "SAP Fiori launchpad site on Cloud Foundry",
      "description": "SAP Fiori launchpad site on Cloud Foundry, deployed from SAP Web IDE"
    },
    "payload": {
      "config": {
        "ushellConfig": {

```

```

90     ],
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           },
120           "groupsOrder": [
121             "salesOrder",
122             "shipment",
123             "purchaseOrder"
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 Shipments* 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-TrackShipments-Service”:

```
mta.yaml
1  ---
2  _schema-version: '3.1'
3  ID: gtt-v2-sample-track-shipments-service
4  version: 2.3.0
5  modules:
6  - name: gtt-sample-track-shipments-service
7    type: java
8    path: srv/
9    properties:
10     SPRING_PROFILES_ACTIVE: cloud
11     DESTINATION_GTT: gtt core engine flp base_url=${space}
12     HERE_MAP_KEY: {here-map-license-key}
13    parameters:
14     buildpack: java_buildpack
15     health-check-timeout: 180
16     host: gtt-sample-track-shipments-service-{unique-identifier}
17    build-parameters:
18     ignore:
19     - "*.md"
20     build-result: target/*.jar
21     timeout: 10m
22    requires:
23     - name: lbn-gtt-sample-app-uaa
24     - name: lbn-gtt-sample-destination
25    resources:
26  - name: lbn-gtt-sample-app-uaa
27    type: org.cloudfoundry.existing-service
28  - name: lbn-gtt-sample-destination
29    type: org.cloudfoundry.existing-service
30
```

- 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/sst/common/constant/Constants.java*
  - Replace “com.lbngttsamples.gtt.app.sof” with the model namespace you got from [Step 2.3](#)

```
Constants.java
1  package com.sap.gtt.v2.sample.sst.common.constant;
2
3  import java.math.BigDecimal;
4
5  public class Constants {
6
7      public static final String GTT_MODEL_NAMESPACE = "com.lbngttsamples.gtt.app.sof";
8      public static final String GTT_MODEL_NAMESPACE_WRITE_SERVICE = GTT_MODEL_NAMESPACE + ".sofWriteService";
9      public static final String MODEL_NAMESPACE = GTT_MODEL_NAMESPACE + ".sofService";
10     public static final String ENTITY_CONTAINER_NAME = "EntityContainer";
11     public static final String COMBINED_MODEL_PATH_SEGMENT = "combined-model";
12     public static final String SHIPMENT_MODEL_NAME = "Shipment";
13     public static final String ELEMENTS_PATH_SEGMENT = "elements";
14     public static final String REST_ROOT_URL = "/sap/logistics/gtt/sample/sst/rest/v1";
15     public static final String ODATA_ROOT_URL = "/sap/logistics/gtt/sample/sst/odata/v1";
16     public static final String DATE_TIME_PATTERN = "yyyy-MM-dd'T'HH:mm:ss'Z'";
17     public static final BigDecimal MAX_LONGITUDE = BigDecimal.valueOf(180);
18     public static final BigDecimal MAX_LATITUDE = BigDecimal.valueOf(90);
19
```

- Run the following command to build the MTAR package:

**mbt build**

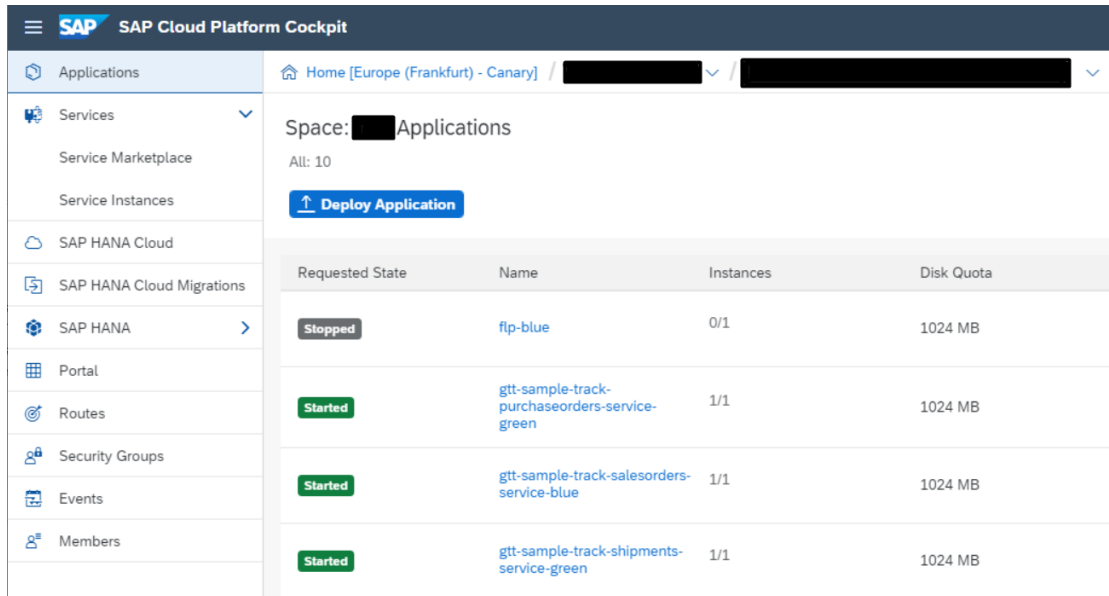
A MTAR file `./mta_archives/gtt-v2-sample-track-shipments-service_xxx.mtar` is then generated.

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

```
cf deploy ./mta_archives/gtt-v2-sample-track-shipments-service_xxx.mtar
```

#### 2.4.5 Check Deployed Apps on SAP Cloud Foundry Cockpit

After operations from [Step 2.4.1](#) to Step 2.4.4, check the deployed apps on SAP Cloud Platform cockpit.



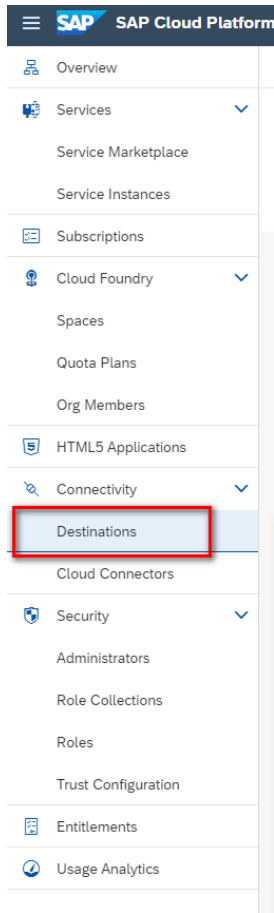
The screenshot shows the SAP Cloud Platform Cockpit interface. The left sidebar contains a navigation menu with options: Applications, Services (expanded), Service Marketplace, Service Instances, SAP HANA Cloud, SAP HANA Cloud Migrations, SAP HANA, Portal, Routes, Security Groups, Events, and Members. The main area displays the 'Space: [redacted] Applications' view. It shows a 'Deploy Application' button and a table of applications. The table has columns for 'Requested State', 'Name', 'Instances', and 'Disk Quota'. The applications listed are: 'flp-blue' (Stopped, 0/1 instances, 1024 MB), 'gtt-sample-track-purchaseorders-service-green' (Started, 1/1 instances, 1024 MB), 'gtt-sample-track-salesorders-service-blue' (Started, 1/1 instances, 1024 MB), and 'gtt-sample-track-shipments-service-green' (Started, 1/1 instances, 1024 MB).

Requested State	Name	Instances	Disk Quota
Stopped	flp-blue	0/1	1024 MB
Started	gtt-sample-track-purchaseorders-service-green	1/1	1024 MB
Started	gtt-sample-track-salesorders-service-blue	1/1	1024 MB
Started	gtt-sample-track-shipments-service-green	1/1	1024 MB



## 2.4.6 Maintain Destination of Forwarding

### 1. Go to “Destinations”



## 2. Configure Destination of Event to Action

Refer to Chapter 3 of the document 03\_Synchronize\_Actual\_Events\_To\_TM-TS.pdf

Note:

Replace "TO\_QW9\_170\_STANDARD" with the destination name that you maintained here and replace "QW9CLNT170" with the logical system of shipment tracked process.

Help

```
368 /*-----Forward to TM system begin-----*/
369 //For Track Shipments Application Only
370 var destinationTMName = "TO_QW9_170_STANDARD";
371 var msgObj = toObject("{}");
372 var eventObj = toObject("{}");
373
374 var reportedBy = null;
375 var estimatedArrivalTime = null;
376 var refPlannedEventMatchKey = null;
377 var estimatedArrival = null;
378
379 eventObj.eventReasonCode = "";
380 eventObj.stopId = "";
381
382 if (trackedProcess != null &&
383     "QW9CLNT170" == trackedProcess.logicalSystem &&
384     "SHIPMENT_ORDER" == actualEvent.trackingIdType &&
385     ("com.lbngttsamples.gtt.app.sof.Shipment.Departure" == actualEvent.eventType ||
386      "com.lbngttsamples.gtt.app.sof.Shipment.Arrival" == actualEvent.eventType ||
387      "com.lbngttsamples.gtt.app.sof.Shipment.Delay" == actualEvent.eventType ||
388      "com.lbngttsamples.gtt.app.sof.Shipment.LoadingStart" == actualEvent.eventType ||
389      "com.lbngttsamples.gtt.app.sof.Shipment.LoadingEnd" == actualEvent.eventType ||
390      "com.lbngttsamples.gtt.app.sof.Shipment.POD" == actualEvent.eventType ||
391      "com.lbngttsamples.gtt.app.sof.Shipment.POPU" == actualEvent.eventType ||
392      "com.lbngttsamples.gtt.app.sof.Shipment.Coupling" == actualEvent.eventType ||
393      "com.lbngttsamples.gtt.app.sof.Shipment.Decoupling" == actualEvent.eventType ||
394      "com.lbngttsamples.gtt.app.sof.Shipment.UnloadingStart" == actualEvent.eventType ||
395      "com.lbngttsamples.gtt.app.sof.Shipment.UnloadingEnd" == actualEvent.eventType)) {
396     if (actualEvent.containsProperty("estimatedArrival") && actualEvent.containsProperty("refPlannedEventMatchKey")) {
397         refPlannedEventMatchKey = actualEvent.refPlannedEventMatchKey;
398         estimatedArrival = actualEvent.estimatedArrival;
399         var i = 0;
400         // Get the latest matched estimatedArrivalTime
```

## 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
StandaloneShipmentTrackingAppUserDisplayTemplate	tt_sof_{space}
StandaloneShipmentTrackingAppUserProcessTemplate	tt_sof_{space}

Note that the role “StandaloneShipmentTrackingAppUserDisplayTemplate” can only enable the user to view the *Track Shipments* template app.

The role “StandaloneShipmentTrackingAppUserProcessTemplate” can only enable the user to report events in the Track Shipments template app.

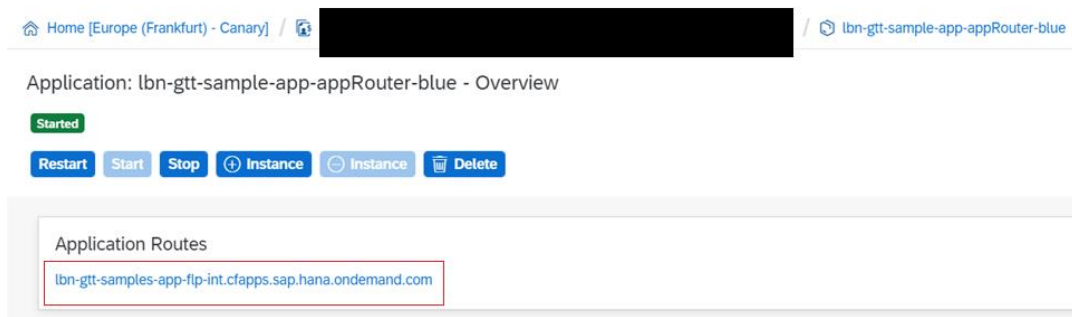
If the user needs access to both view the Track Shipments template app and report events in the app, then assign both roles to the role template.

If the user needs access to other template apps such as *Track SO Fulfillment* or *Track PO Fulfillment*, add the following roles:

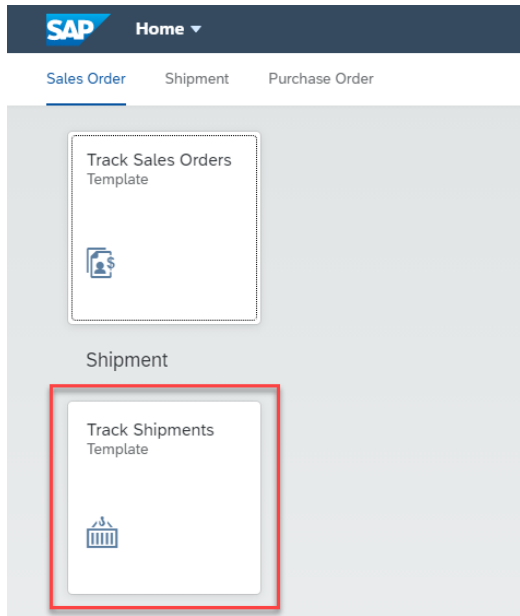
Role	Application
SalesOrderFulfillmentAppUserDisplayTemplate	tt_sof_{space}
PurchaseOrderFulfillmentAppUserDisplayTemplate	tt_sof_{space}

## 2.4.8 Open *Track Shipments* 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 Shipments*



- Open the *Track Shipments* template app

The screenshot shows the SAP 'Track Shipments' app interface. At the top, there's a dark blue header with a back arrow, the SAP logo, and the text 'Track Shipments'. Below the header, there's a 'Standard' dropdown menu. The main area contains several filter fields arranged in two rows. The first row includes 'Shipment Number:', 'Carrier:', 'Process Status:', 'Execution Status:', and 'Transportation Mode:'. The second row includes 'Shipping Type:', 'Vehicle:', 'Planned Departure Location:', 'Planned Arrival Location:', and 'Delivery Number:'. Each field has a corresponding input box with a search icon. To the right of these fields is an 'Adapt Filters' button and a blue 'Go' button. Below the filters is a table titled 'Shipments (295)'. The table has six columns: 'Shipment Number', 'Carrier', 'Planned Departure', 'Planned Arrival', 'Execution Status', and 'Process Status'. The table contains several rows of shipment data.

Shipment Number	Carrier	Planned Departure	Planned Arrival	Execution Status	Process Status
6100062252		MEB_CUS_46 Oct 31, 2018, 5:12:00 PM	Golden Nuts Inc.	Not Started	Overdue
4150002217	10000043	The Cookie Company Shp. Point Feb 2, 2999, 7:00:00 AM	Walmart Inc. Feb 2, 2999, 5:00:00 PM	Not Started	As Planned
0000001671	10002419	Golden Nuts Inc.	US HARBOR Dec 20, 2020, 7:00:00 PM	In Transit	Overdue
000000265X	10002418	New York Harbor Dec 11, 2020, 7:00:00 AM	Golden Nuts Inc. Dec 12, 2020, 7:00:00 AM	In Transit	As Planned
0000002643	10002419	New York Harbor Dec 17, 2020, 7:00:00 AM	Golden Nuts Inc. Dec 18, 2020, 7:00:00 AM	In Transit	Early

### 3. Implement ERP Extractor

For ERP extractor implementation, refer to the following document:

04\_Extractor\_Creation\_Guide-TS.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 template apps in SAP BCP system under component “SCM-LBN-GTT-APP”. Then follow the SAP Note 1773689:

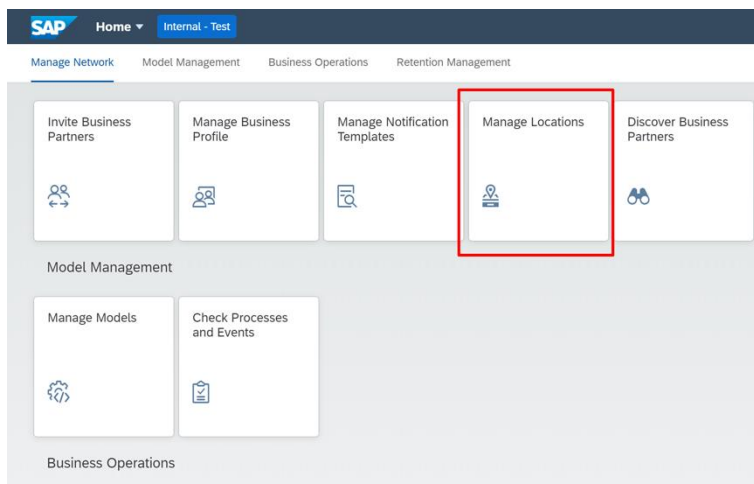
<https://launchpad.support.sap.com/#/notes/0001773689> to add logon credentials to the secure area so that we can provide you with the key in a safe way. After you get the key, you can use it in [Step 2.4.4](#) when deploying the backend service.

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

Standard ▾ Download Excel Template Upload Locations

Location ID:  Object Type:  Description:  Country/Region:  City:  Adapt Filters

Locations (22) Create

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 more, refer to the following document:

04\_Extractor\_Creation\_Guide-TS.pdf

< **SAP** Manage Locations ▾ Internal - Test

Create Location

GENERAL ALTERNATIVE LOCATION IDS

Object Type: \*  
Logistic Location ▾

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

Description: \*  
[Text Input]

Time Zone:  
[Dropdown] [Text Input]

Longitude:  
+ (East) ▾ Example: 000.00000000

Latitude:  
+ (North) ▾ Example: 00.00000000

Country/Region:  
[Dropdown] [Text Input]

State:  
[Dropdown] [Text Input]

City:  
[Text Input]

District:  
[Text Input]

Street/House Number:  
[Text Input] [Text Input]

Zip Code:  
[Text Input]

### 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)”.