

Implementation Guide

– *Track SO Fulfillment* 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.

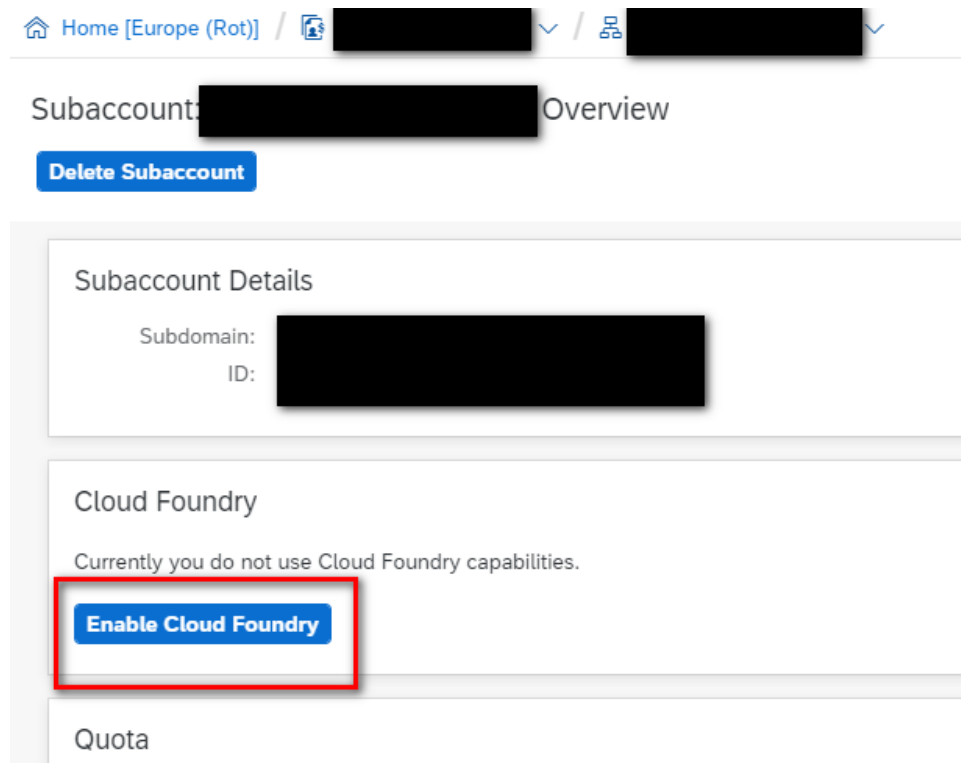
0.Prerequisites

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

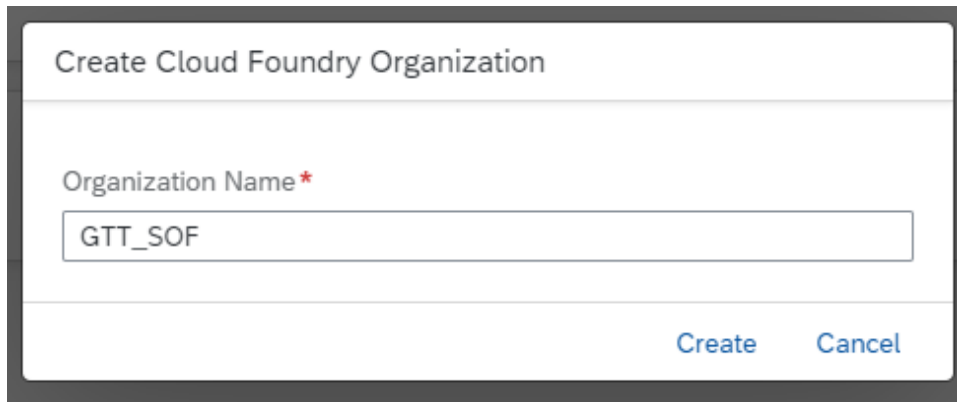
1.Environment Configuration in Logistics Business Network, Global Track and Trace Option

1.1 Enable Cloud Foundry and Create Space

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

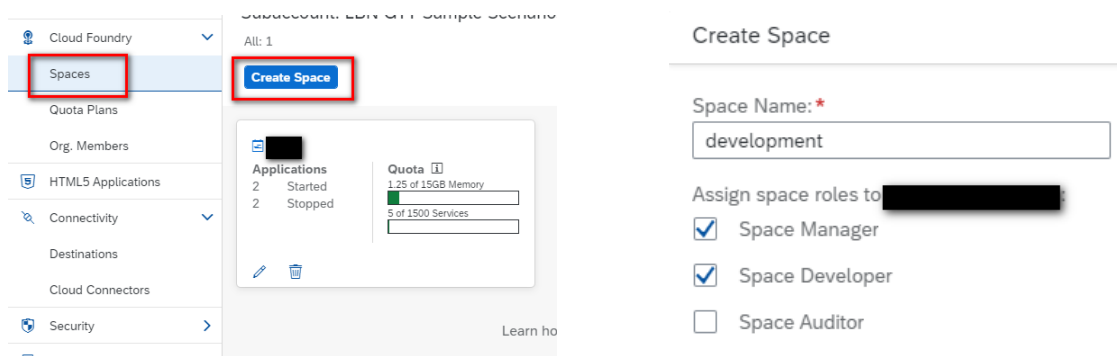


2. Fill in the Organization Name and click "Create"



A dialog box titled "Create Cloud Foundry Organization". It contains a text input field for "Organization Name" with a red asterisk indicating it is required. The field contains the text "GTT_SOF". At the bottom right, there are two buttons: "Create" and "Cancel".

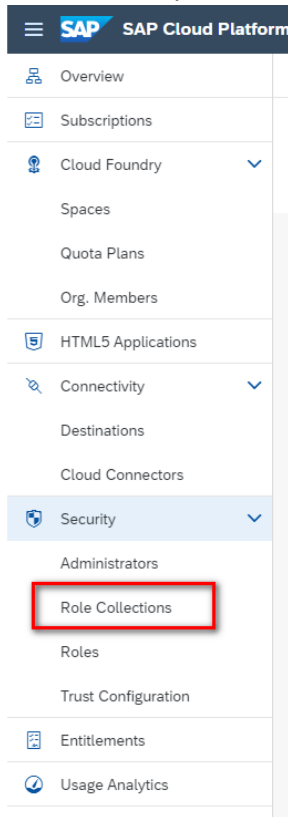
3. Go to "Cloud Foundry" -> "Spaces"
Click "Create Space"
Fill in the Space Name and click "Create"



The image shows the Cloud Foundry Spaces interface and the "Create Space" dialog. On the left, the "Spaces" menu item is highlighted in the sidebar. In the main content area, the "Create Space" button is highlighted. The "Create Space" dialog is open, showing the "Space Name" field with the value "development". Below the name field, there are checkboxes for assigning roles: "Space Manager" (checked), "Space Developer" (checked), and "Space Auditor" (unchecked). The dialog also shows a "Quota" section with a progress bar for "1.25 of 15GB Memory" and "5 of 1500 Services".

1.2 Maintain Roles and Users

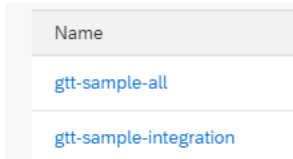
1. Go to “Security” -> “Role Collections”



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 SO 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 the global track and trace option and the *Track SO Fulfillment* template app.

IT Administrator needs to maintain application users in identity provider.

For example, user1@sap.com



The screenshot shows a table titled 'Users (51)' with a search bar. The table has five columns: ID, Identity Provider, E-Mail, First Name, and Last Name. The first three rows of data are visible, all showing 'SAP ID Service' as the identity provider and email addresses ending in '@sap.com'. The first names and last names are partially obscured by black boxes.

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]

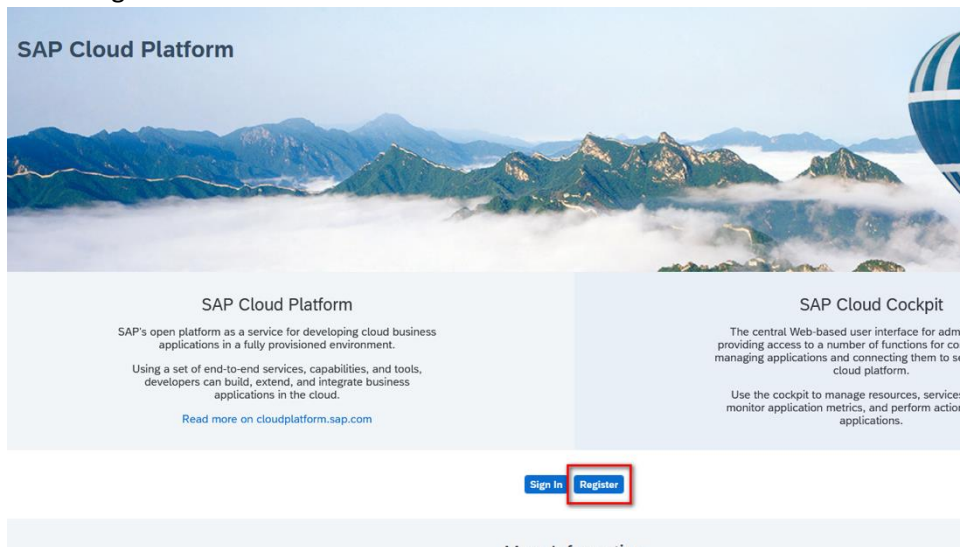
Note: The application user in this step should be different from the technical user created in [Step 1.3](#).

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

SAP

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:

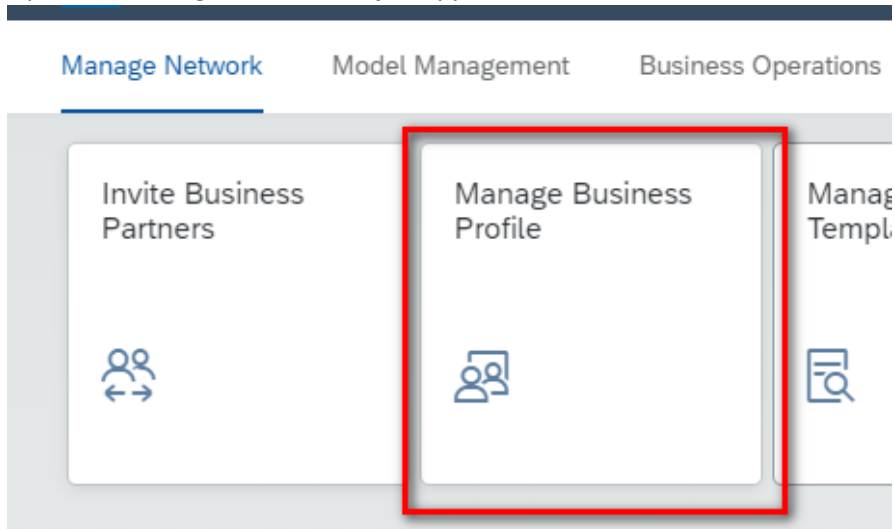
Role	Application
EMIDocIntegrationTemplate	lbn_gtt_core
MetadataServiceIntegrationTemplate	lbn_gtt_core
ReadServiceIntegrationTemplate	lbn_gtt_core
WriteServiceIntegrationTemplate	lbn_gtt_core
LocationProcessTemplate	lbnplatform-loc-broker

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

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 the *Manage Business Profile* app



7. Add one Alternate Identifier:
Identifier Type: Technical User
ID: the email address of technical user

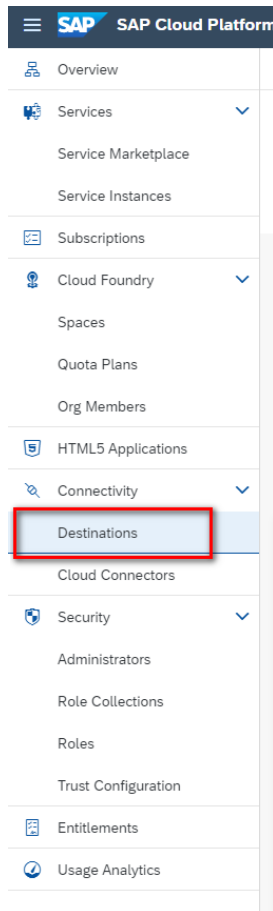
Email	Phone Number
[REDACTED]	[REDACTED]

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

1. Go to “Destinations”



2. Configure Destination of GTT Core Engine Base URL

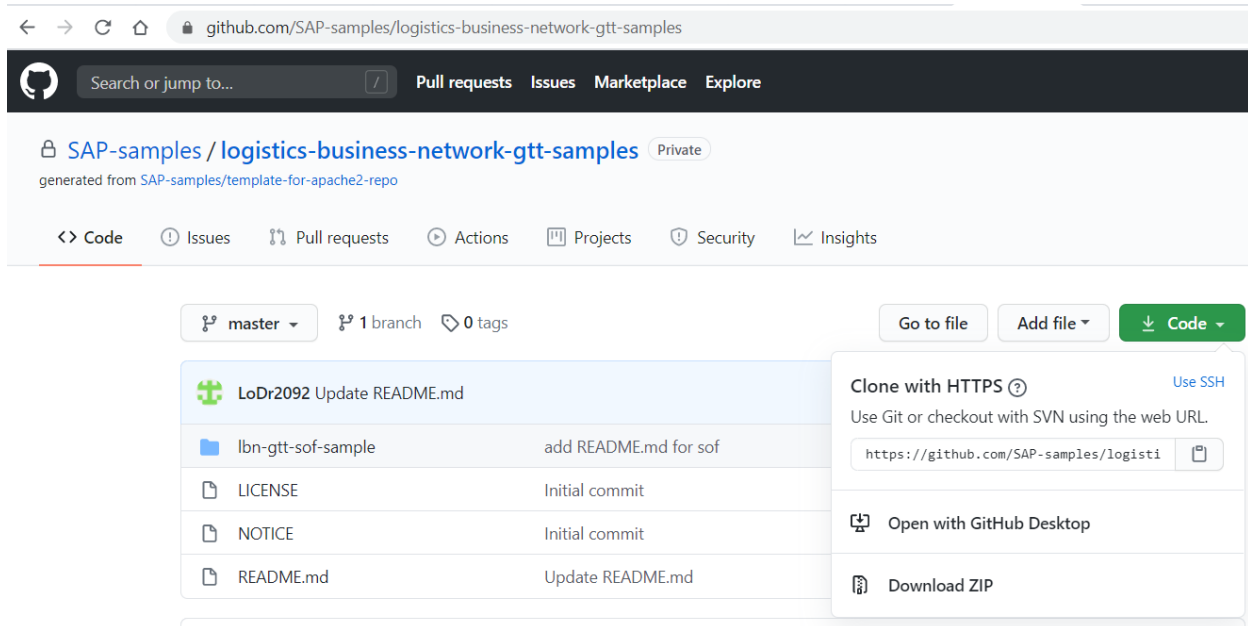
Name	gtt_core_engine_flp_base_url
Type	HTTP
Description	<optional>
URL	e.g. https://lbn-gtt-samples.gtt-flp-lbnplatform-int.cfapps.sap.hana.ondemand.com/api
Proxy Type	Internet
Authentication	BasicAuthentication
User	User from Step 1.3
Password	Password from Step 1.3

2. Implement *Track SO 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.

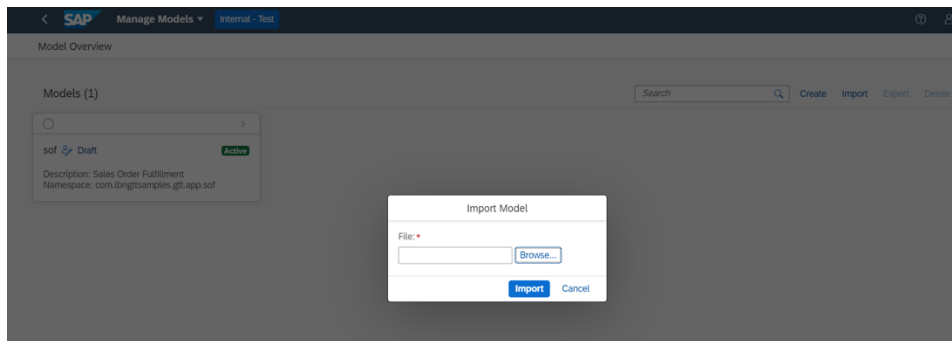


2.2 Download and Setup Tools

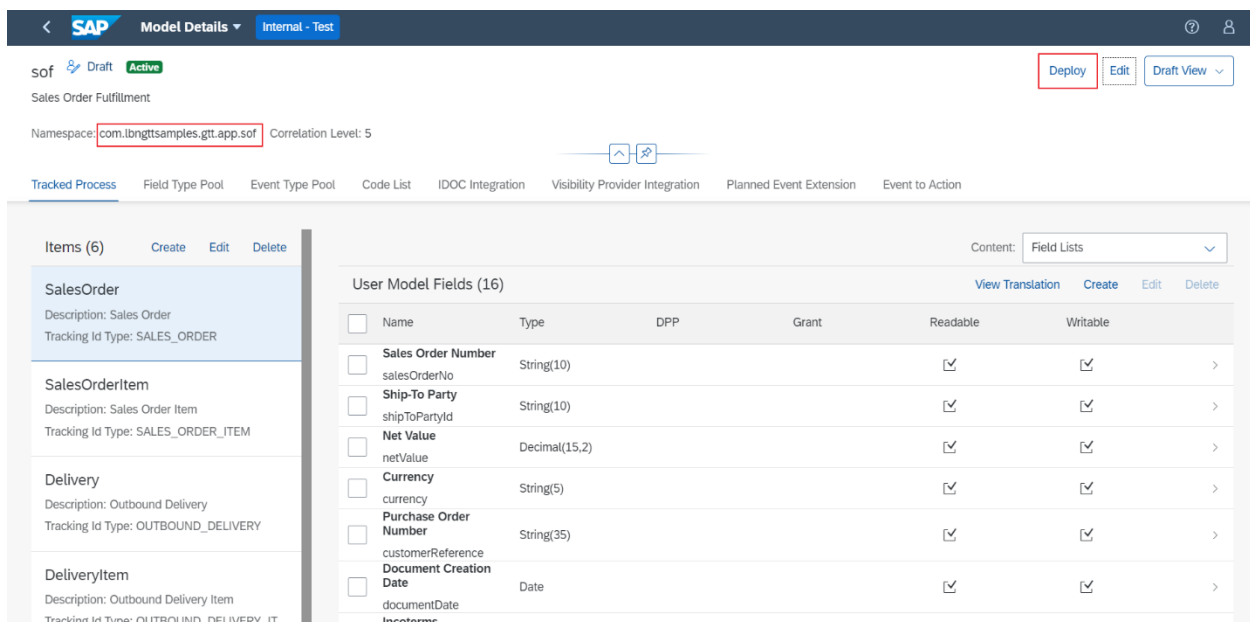
1. Install JDK 8 and Maven
2. Install NPM, Node JS, and grunt-cli
<https://www.saplearners.com/how-to-install-node-js-and-npm/>
Run the following command after NPM is installed:
`npm config set @sap:registry "https://npm.sap.com" -g`
3. Install Cloud Foundry Command Line Interface
<https://developers.sap.com/tutorials/cf-download-cli.html>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

SAP Model Details Internal - Test

sof **Active** Edit

Sales Order Fulfillment

Namespace: `com.lbgtttsamples.gtt.app.sof` Correlation Level: 5

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

Help

```

11 //actualEvent.actualBusinessTimeZone;
12 //?=> trackedProcess;
13 //?trackedProcess;
14
15 var EXECUTION_STATUS_EVENT_FOR_DELIVERY_ITEM = "com.lbgtttsamples.gtt.app.sof.DeliveryItem.DeliveryItemPOD";
16 var EXECUTION_STATUS_EVENT_FOR_SHIPMENT = "com.lbgtttsamples.gtt.app.sof.Shipment.POD";
17
18 var obj = toObject("{}");
19 var needForward = false;
20 var emailEnabled = false;
21
22 ?=> eventType;
23 ?actualEvent.eventType;
24 ?=> trackedProcess;
25 ?trackedProcess;
26
27 if (emailEnabled && "com.lbgtttsamples.gtt.app.sof.SalesOrder.SalesOrderEvent" == actualEvent.eventType) {
28   var userPlaceholders0 = toObject("{}");
29   var appPlaceholders0 = toObject("{}");
30   var directMailTemp0 = reminderService.generateDirectMailTemplate();
31   var salesOrderGUID0 = trackedProcess.id;
32
33   userPlaceholders0.recipients1 = "johnny.zong@sap.com";
34   userPlaceholders0.salesOrderNo = trackedProcess.salesOrderNo;
35   userPlaceholders0.salesOrderGUID = salesOrderGUID0;
36
37   appPlaceholders0.solutionOwner_BpName = "This is BP name";
38   appPlaceholders0.App_Placeholder_1 = "This is APP Place holder 1";
39
40   directMailTemp0.templateId = "invite";
41   directMailTemp0.recipients = ["jimling.wang@sap.com", "dexian.li@sap.com", "joe.xia@sap.com"];

```

Save Save and Deploy 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 in which you want to deploy the template apps

```

MINGW64
Authenticating...
OK
Select an org:
1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]
6. [redacted]
Org (enter to skip): 6
Targeted org [redacted]

Select a space:
1. acc
2. perf
3. int
4. inthf
5. sbx
Space (enter to skip): 5
Targeted space [redacted]

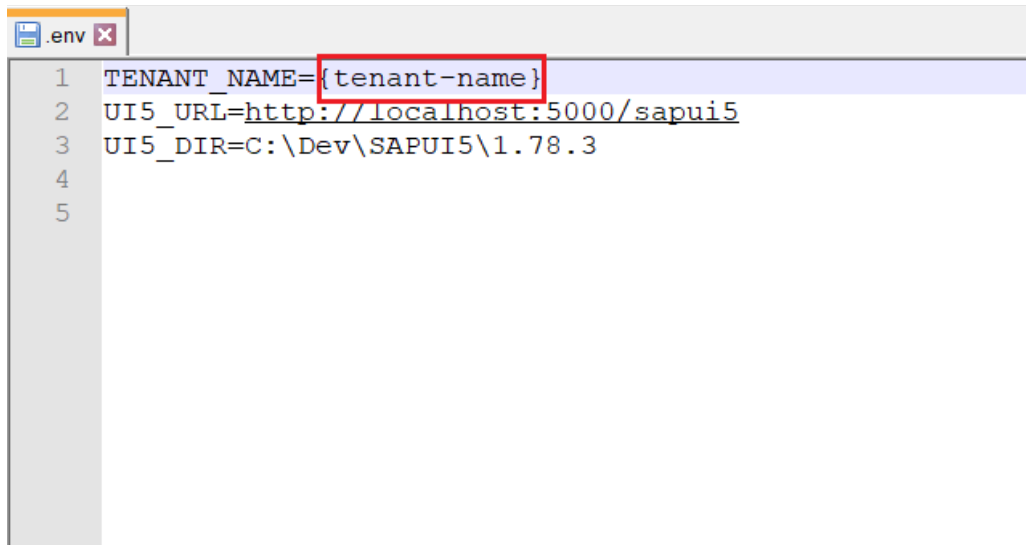
API endpoint: https://api.cf.sap.hana.ondemand.com (API version: 3.81.0)
User: [redacted]
Org: [redacted]
Space: [redacted]

```

2.4.2 Package and Deploy *Track SO 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](#).



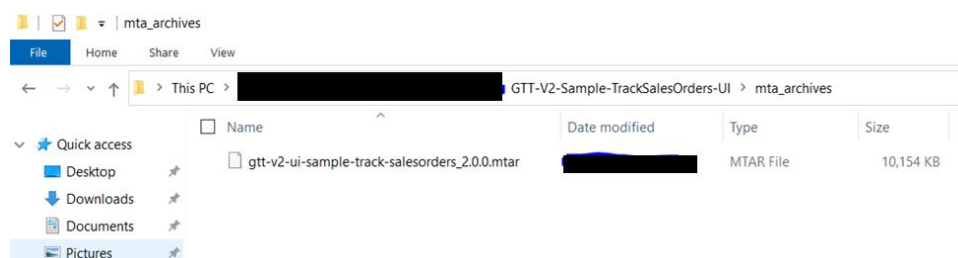
```
.env
1 TENANT_NAME={tenant-name}
2 UI5_URL=http://localhost:5000/sapui5
3 UI5_DIR=C:\Dev\SAPUI5\1.78.3
4
5
```

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-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 *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, please deploy all the UI projects you need in advance. Otherwise, the deployment of this project will fail.

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

- Open the *mta.yaml* file
- Delete *lbn-gtt-sst-api* and *lbn-gtt-pof-api* in *lbn-gtt-sample-app-appRouter* and *resources* modules
- Delete *gtt-ui-sample-track-shipments-app-host* and *gtt-ui-sample-track-purchaseorders-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-{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.sst* and *com.sap.gtt.app.sample.pof* in *payload/catalogs/payload/viz* array
- Delete groups *shipments* and *purchaseOrder* in *payload/groups* array
- Delete orders *shipments* 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": {
      "ucshellConfia": {

```

```

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            "fiori12": {
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 SO 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”:

```
mta.yaml
1  ---
2  _schema-version: '3.1'
3  ID: gtt-v2-sample-track-salesorders-service
4  version: 2.3.0
5  modules:
6  - name: gtt-sample-track-salesorders-service
7    type: java
8    path: srv/
9    properties:
10     SPRING_PROFILES_ACTIVE: cloud
11     DESTINATION_GTT: gtt_core_engine_flp_base_url
12     HERE_MAP_KEY: {here-map-license-key}
13    parameters:
14     buildpack: java_buildpack
15     health-check-timeout: 180
16     host: gtt-sample-track-salesorders-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
25  resources:
26  - name: lbn-gtt-sample-app-uaa
27    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](#)

```
Constants.java
1  package com.sap.gtt.v2.sample.sof.constant;
2
3  public class Constants {
4      public static final String GTT_MODEL_NAMESPACE = "com.lbngttsamples.gtt.app.sof";
5      public static final String GTT_MODEL_NAMESPACE_WRITE_SERVICE = GTT_MODEL_NAMESPACE + ".sofWriteService";
6      public static final String MODEL_NAMESPACE = GTT_MODEL_NAMESPACE + ".sofService";
7
8      public static final String URL_SPLITTER = "/";
9      public static final String ENTITY_CONTAINER_NAME = "EntityContainer";
10     public static final String SAP_ICON_LEAD = "sap-icon://lead";
11     public static final String ID = "id";
12
13     public static final String EVENT_STATUS_PLANNED = "PLANNED";
14
15     public static final String PROCESS_STATUS_OVERRIDE = "OVERRIDE";
16
```

- Run the following command to build the MTAR package:

`mbt build`

A MTAR file `./mta_archives/gtt-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.

The screenshot shows the SAP Cloud Platform Cockpit interface. The left sidebar contains navigation links for Applications, Services, SAP HANA Cloud, SAP HANA, Database Systems, Tenant Databases, Service Requests, Portal, Routes, Security Groups, Events, and Members. The main area displays the 'Applications' page for the 'Space: [redacted] Applications'. It shows a list of 3 of 40 applications. A 'Deploy Application' button is visible. The table below lists the deployed applications:

Requested State	Name	Instances	Disk Quota	Memory
Started	gtt-sample-track-salesorders-service	1/1	1024 MB	1024 MB
Stopped	gtt-ui-sample-track-salesorders-ui_deployer	0/1	1024 MB	256 MB
Started	lbn-gtt-sample-app-appRouter	1/1	256 MB	256 MB

2.4.6 Maintain Destination of Forwarding

1. Obtain the UAA Token

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

The screenshot shows the application status for 'gtt-sample-track-salesorders-service-green'. It is in a 'Started' state with 1/1 instances.

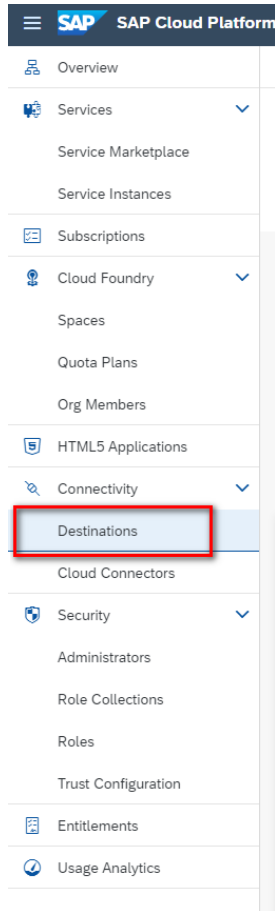
- Find the environment of UAA
- Copy the value of **clientid** and **clientsecret**

The screenshot shows the 'Service Bindings' page for the application 'gtt-sample-track-salesorders-service-green'. It displays a binding for 'lbn-gtt-sample-app-uaa' to the 'xsuaa' service. Below the binding, there is a section for 'Sensitive data' which contains a JSON object with various configuration parameters. The 'clientid' and 'clientsecret' fields are highlighted with red boxes.

Name	Service	Plan
lbn-gtt-sample-app-uaa	xsuaa	application

```
{
  "tenantmode": "dedicated",
  "sburl": "[redacted]",
  "subaccountid": "[redacted]",
  "clientid": "[redacted]",
  "xsappname": "[redacted]",
  "clientsecret": "[redacted]",
  "url": "https://[redacted].authentication.eu10.hana.ondemand.com",
  "uaadomain": "authentication.eu10.hana.ondemand.com",
  "verificationkey": "-----BEGIN PUBLIC KEY-----
[redacted]
-----",
  "apiurl": "https://api.authentication.eu10.hana.ondemand.com",
  "identityzoneid": "[redacted]",
  "tenantid": "[redacted]",
  "zoneid": "[redacted]"
}
```

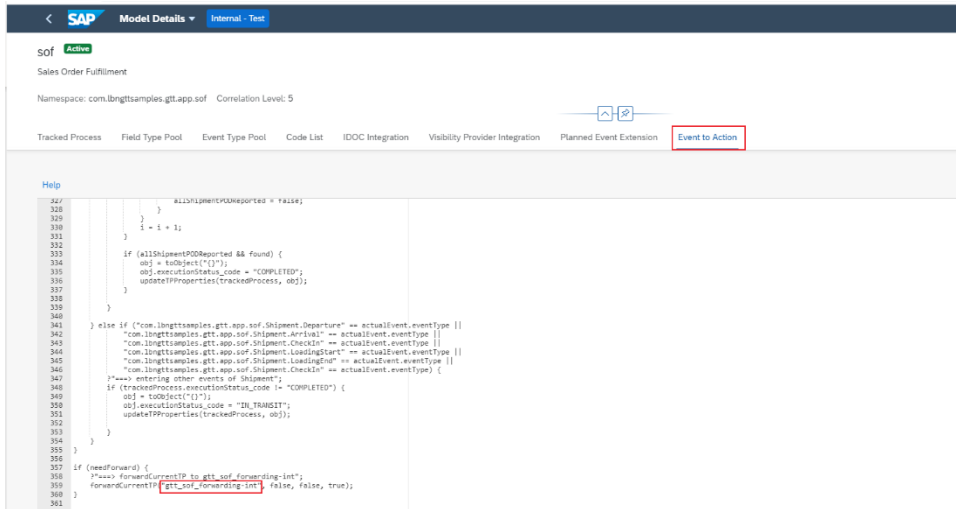
2. Go to “Destinations”



3. Configure Destination of Event to Action Forwarding

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

Note: You need to update the destination name in the *Event to Action* script of the *Track SO Fulfillment* model if you change the name from “gtt_sof_forwarding_int” to others.



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

Role	Application
SalesOrderFulfillmentAppUserDisplayTemplate	tt_sof_{space}

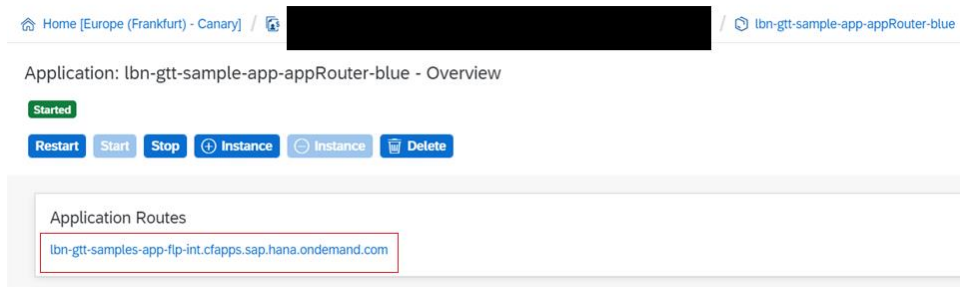
Note that the role of “SalesOrderFulfillmentAppUser” is used to access the *Track SO Fulfillment* template app.

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

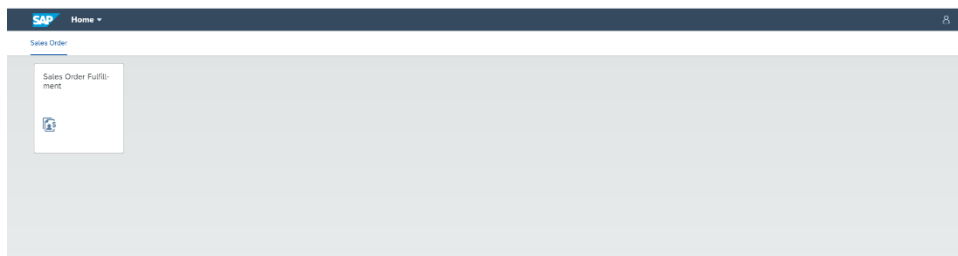
Role	Application
StandaloneShipmentTrackingAppUserDisplayTemplate	tt_sof_{space}
StandaloneShipmentTrackingAppUserProcessTemplate	tt_sof_{space}
PurchaseOrderFulfillmentAppUserDisplayTemplate	tt_sof_{space}

2.4.8 Open *Track SO Fulfillment* Template App from SAP Fiori Launchpad

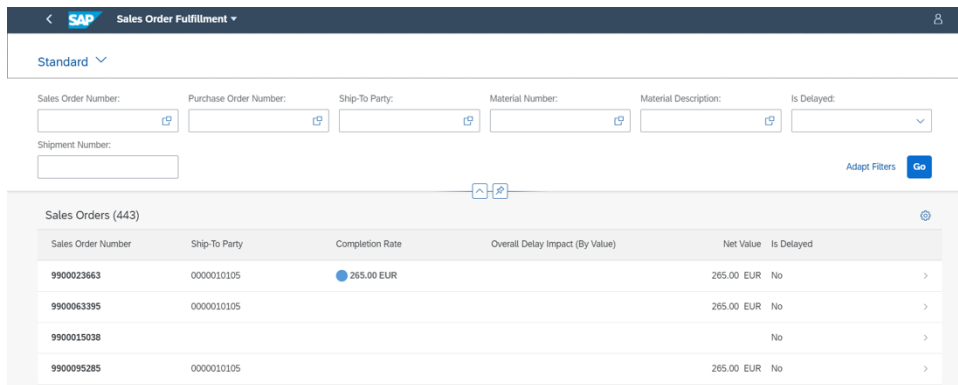
- Obtain the Application Routes from SAP Cloud Foundry cockpit



- Click the link of Application Routes
The system browser then navigates to the SAP Fiori Launchpad of *Track SO Fulfillment*



- Open the *Track SO Fulfillment* template app



3. Implement ERP Extractor

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

02_Extractor_Creation_Guide-TSOF.pdf

4. Other Configuration

4.1 Obtain Here Map License

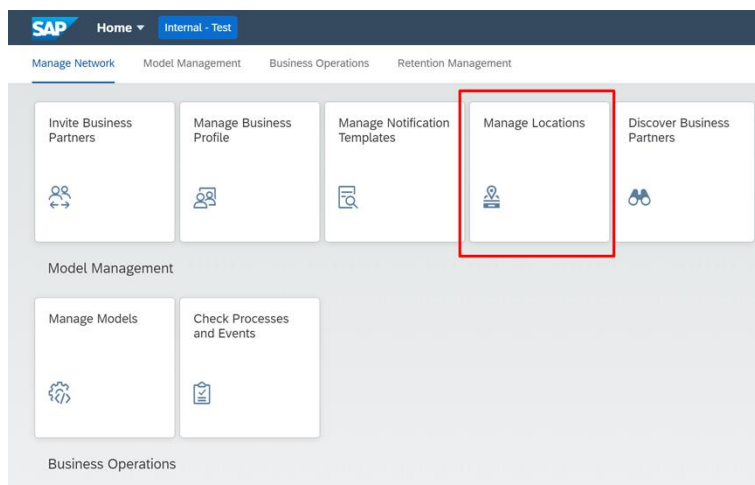
To have the map view, log the incident with the URL of Fiori Launchpad of *Track SO Fulfillment* template app in SAP BCP system under component “SCM-LBN-GTT-APP”. Then follow the SAP Note 1773689: <https://launchpad.support.sap.com/#/notes/0001773689> to add logon credentials to the secure area so that 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:

02_Extractor_Creation_Guide-TSOF.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:

Time Zone:

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 and see the chapter “Onboarding and User Management (Data Contributors)”.