

Implementation Guide – Sales Order Fulfillment App

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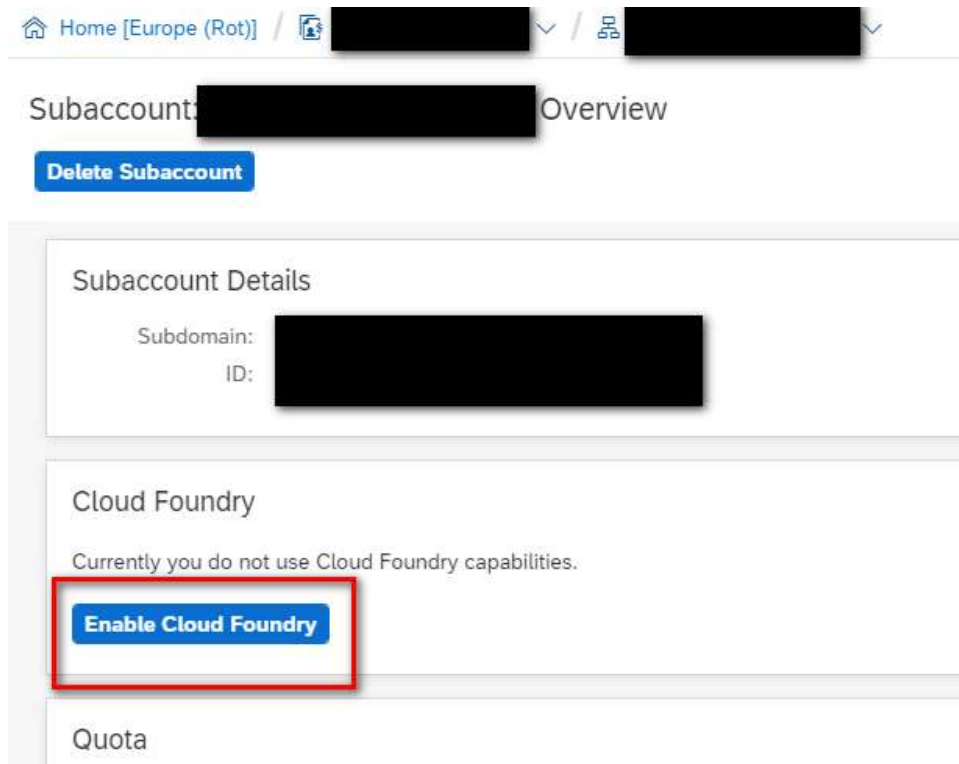
0.Prerequisites

- An SAP Cloud Platform global account with entitlements for SAP LBN Track and Trace option, 1 portal service quota and 10 GB Application Runtime quota.
- To integrate with ERP, you need an SAP ERP or SAP ECC system running on Netweaver 7.31 or higher with SAP NOTE 2937175 being implemented.
- To integrate with visibility provider, please log your incident in SAP BCP system under component “SCM-LBN-GTT-COR”. Currently it will supported manually.

1.Environment configurations in LBN Track and Trace Option

1.1 Enable cloud foundry and create space

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



2. Enter organization name and click “Create”.

Create Cloud Foundry Organization

Organization Name *

Create Cancel

- Go to "Cloud Foundry" -> "Spaces". Click "Create Space". Give a name click "Create".

The screenshot shows the Cloud Foundry console interface. On the left, the 'Spaces' menu item is highlighted. In the center, the 'Create Space' button is visible. On the right, the 'Create Space' dialog is open, showing the 'Space Name' field with the value 'development' and the 'Assign space roles to' section with checkboxes for 'Space Manager', 'Space Developer', and 'Space Auditor'.

Cloud Foundry Spaces

All: 1

Create Space

Space Name: *

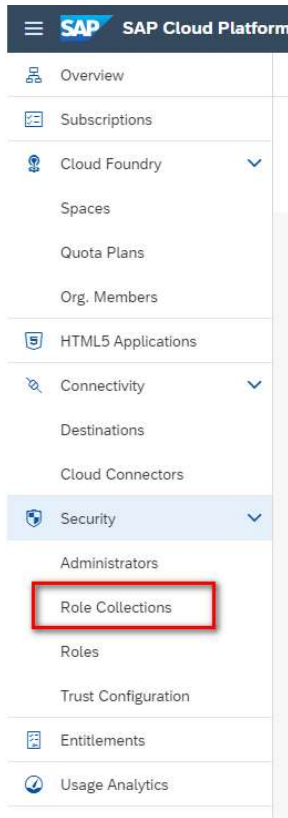
development

Assign space roles to [redacted]

- ☒ Space Manager
- ☒ Space Developer
- ☐ Space Auditor

1.2 Maintain roles and users

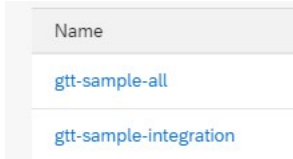
- Configure Roles and Role Collections



2. Create 2 role collections (names can vary):

gtt-sample-all

gtt-sample-integration



Role template “gtt-sample-all” will be granted to users who will access GTT and Sales Order Fulfillment App.

Role template “gtt-sample-integration” will be granted to only technical user who will access GTT APIs for development purpose.

| 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 |

3. Go to role of gtt-sample-all, and add the

following roles:

- Grant this role to your **application** user:

Application users are those who could access GTT and Sales Order Fulfillment Applications.

IT Administrator need to maintain application users in identity provider.

For example, user1@sap.com

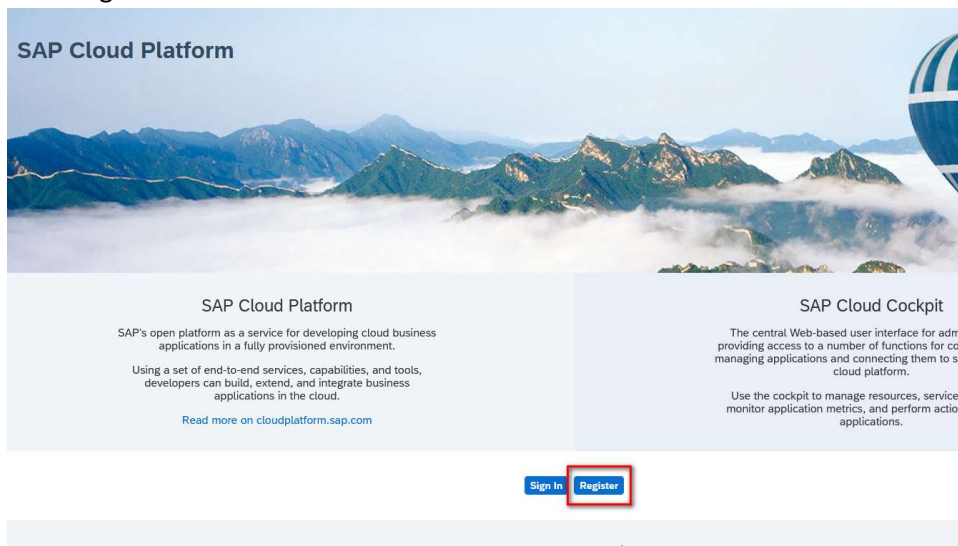
| Users (51) | | | | |
|--------------------|-------------------|--------------------|------------|------------|
| ID | Identity Provider | E-Mail | First Name | Last Name |
| [REDACTED]@sap.com | SAP ID Service | [REDACTED]@sap.com | [REDACTED] | [REDACTED] |
| [REDACTED]@sap.com | SAP ID Service | [REDACTED]@sap.com | [REDACTED] | [REDACTED] |
| [REDACTED]@sap.com | SAP ID Service | [REDACTED]@sap.com | [REDACTED] | [REDACTED] |

1.3 Maintain technical user

- Go to the SAP Cloud Platform to create technical user account:

<https://account.hana.ondemand.com/#/home/welcome>

Click Register



2. Fill the required blanks:

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](#)

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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 role of gtt-sample-integration, and add the following roles:

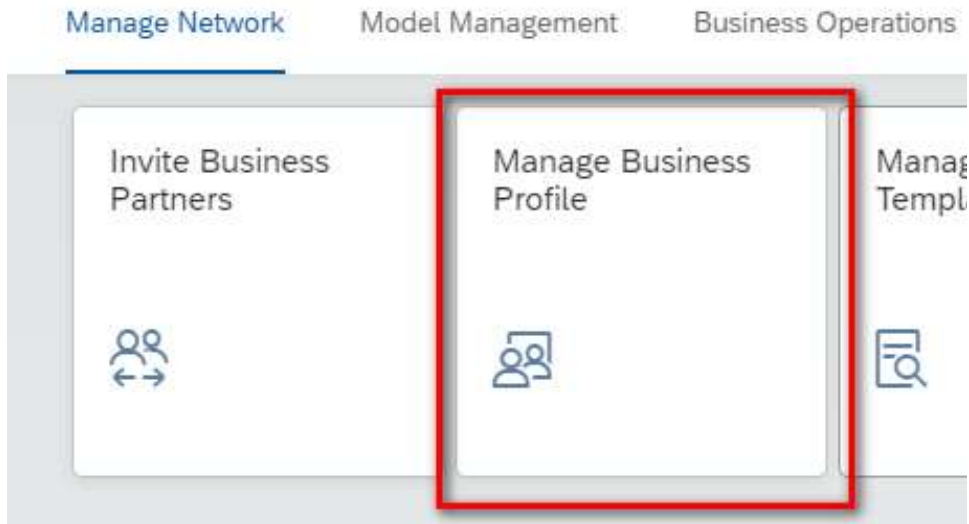
| Role | Application |
|------------------------------------|--------------|
| EMIDocIntegrationTemplate | lbn_gtt_core |
| MetadataServiceIntegrationTemplate | lbn_gtt_core |
| ReadServiceIntegrationTemplate | lbn_gtt_core |
| WriteServiceIntegrationTemplate | lbn_gtt_core |

5. Grant this role to your **technical** user created in step 1:
For example, techuser1@techcompany.com

Users (1)

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

- Go to GTT Launchpad and click “Manage Business Profile



- Edit and maintain the “Alternate Identifiers”.
Identifier: Technical User
ID: email address of technical user created in step 2

| Email | Phone Number |
|------------|--------------|
| [REDACTED] | [REDACTED] |

Alternate Identifiers (1)

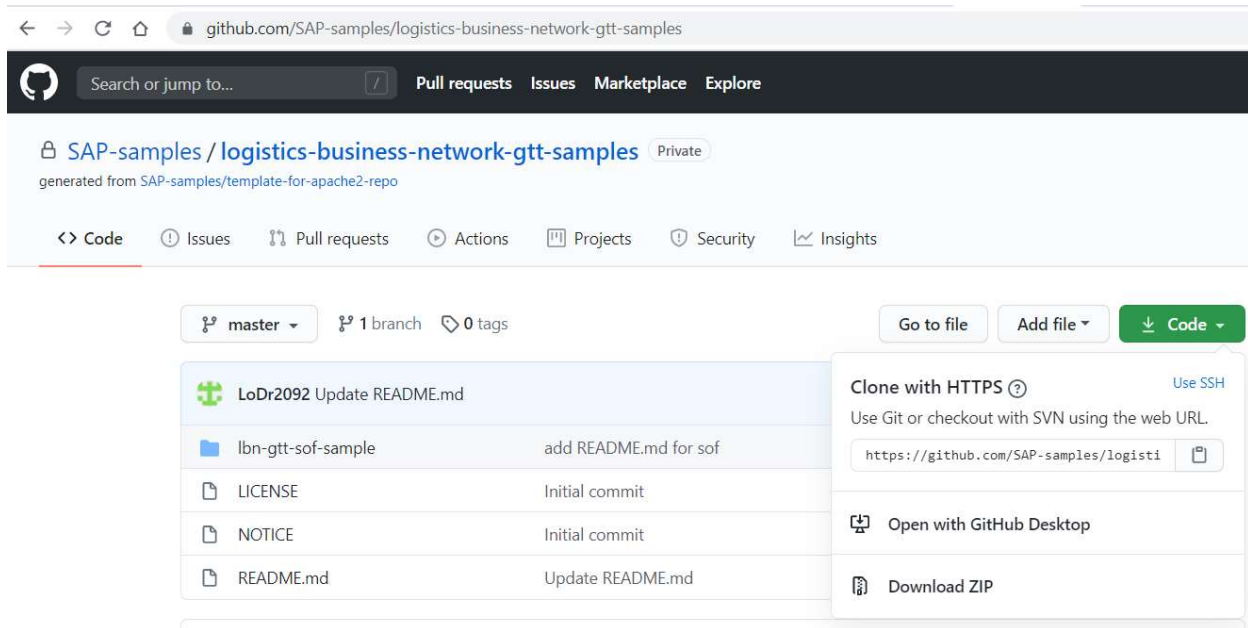
| Identifier Type | ID |
|-----------------|----------------|
| Technical User | [REDACTED].com |

2. Implement Sales Order Fulfillment APP

2.1 Download Sample Code

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

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



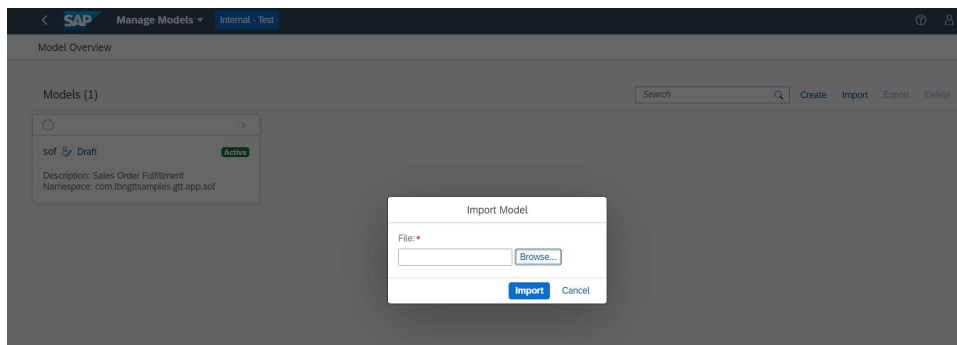
2.2 Download and Setup Tools

- Set Up Java Development Environment
<https://developers.sap.com/tutorials/cp-java-reference-app-setup.html>
Make sure JDK 8 and maven are installed.
- Install Cloud Foundry Command Line Interface
<https://developers.sap.com/tutorials/cp-cf-download-cli.html>
- Install Cloud MTA Build Tool (MBT)
<https://sap.github.io/cloud-mta-build-tool/download/>
- Install NPM, Node JS and grunt-cli
<https://www.saplearners.com/how-to-install-node-js-and-npm/>
run following command after npm installed:
`npm config set @sap:registry "https://npm.sap.com" -g`

2.3 Deploy Model

Go to *model* folder of downloaded source code, make sure *sof-model-xxxxxxx.json* (e.g. sof-model-2020091001.json) exists.

Open Manage Models APP through GTT Fiori launchpad, click Import and then click Browse to select the sof-model-xxxxxxx.json file. Then click Deploy button to deploy the model to GTT system.



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. And then select the organization and space in which you want to deploy the sample apps.

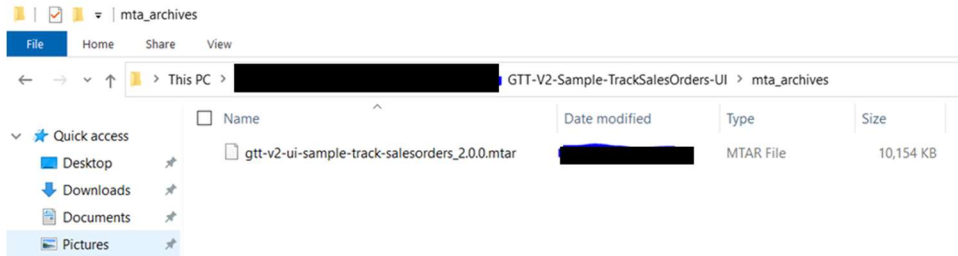
```
MINGW64 [redacted]
Authenticating...
OK
Select an org:
1. [redacted]
2. [redacted]
3. [redacted]
4. [redacted]
5. [redacted]
6. [redacted]
Org (enter to skip): 6
Targeted org [redacted]
Select a space:
1. acc
2. perf
3. int
4. inthf
5. sbx
Space (enter to skip): 5
Targeted space [redacted]
API endpoint: https://api.cf.sap.hana.ondemand.com (API version: 3.81.0)
User: [redacted]
Org: [redacted]
Space: [redacted]
```

2.4.2 Package and Deploy SOF Frontend App

In command line tool, navigate to GTT-V2-Sample-TrackSalesOrders-Service directory, run following command to build mtar package:

```
mbt build
```

There should be `./mta_archives/gtt-v2-ui-sample-track-salesorders-service_xxx.mtar` generated.



Deploy mtar package to Cloud Foundry by running following command:

```
cf deploy ./mta_archives/gtt-v2-ui-sample-track-salesorders-service_xxx.mta
```

The deployment will last several to tens of minutes depends on your network conditions.

2.4.3 Package and Deploy SOF Fiori Launchpad

In command line tool, navigate to GTT-V2-Sample-App-FLP directory, edit mtad.yaml,

Replace {unique-identifier} with something unique like your company name or cloud foundry global account name.

```

10 - name: lbn-gtt-sample-app-appRouter
11   type:approuter.nodejs
12   path: flp_appRouter
13   parameters:
14     disk-quota: 256M
15     memory: 256M
16     routes:
17       - route: lbn-gtt-samples-app-flp-{unique-identifier} ${domain}
18   properties:
19     SAP_JWT_TRUST_ACL:
20       - clientid: ""
21         identityzone: ""
22     destinations:
23       - name: lbn-gtt-sof-api
24         url: "~(lbn-gtt-sof-api/url)"
25         forwardAuthToken: true
26   requires:
27     - name: lbn-gtt-sample-app-uaa
28     - name: lbn-gtt-sample-app-runtime
29     - name: lbn-gtt-sample-portal-resources
30     - name: lbn-gtt-sof-api
31
32 - name: flp
33   type: com.sap.portal.content
34   path: flp
35   parameters:
36     stack: cflinuxfs3
37     memory: 128M
38     buildpack: 'https://github.com/cloudfoundry/nodejs-buildpack/releases/download/v1.6.39/nodejs-buildpack-cflinuxfs3-v1.6.39.'
39   requires:
40     - name: lbn-gtt-sample-app-uaa
41     - name: lbn-gtt-sample-portal-resources
42     - name: gtt-ui-sample-track-salesorders-app-host
43
44 resources:
45   - name: lbn-gtt-sample-app-runtime
46     parameters:
47       service-plan: app-runtime
48       service: html5-apps-repo
49     type: org.cloudfoundry.managed-service
50   - name: lbn-gtt-sample-portal-resources
51     parameters:
52       service-plan: standard
53       service: portal
54     type: org.cloudfoundry.managed-service
55   - name: lbn-gtt-sof-api
56     properties:
57       url: https://gtt-sample-track-salesorders-service-{unique-identifier}.${domain}
57   - name: lbn-gtt-sample-app-uaa

```

Run following command to build mtar package:

mbt build

There should be `./mta_archives/lbn-gtt-sample-app-flp_xxx.mtar` generated.

Deploy mtar package to Cloud Foundry by running following command:

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

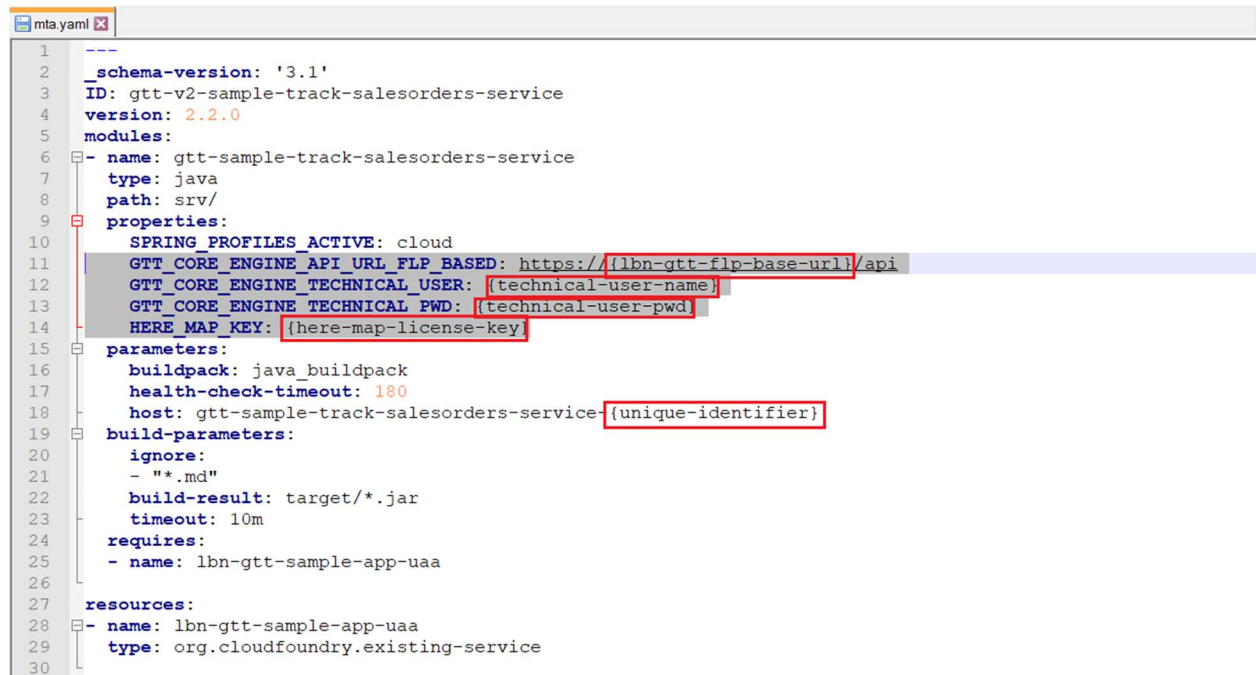
2.4.4 Package and Deploy SOF Backend Service

Replace user/password, HereMap key and host configuration

Get user/password from step 1.3. Get HereMap key from SAP support??? .

Replace following entries in `mtad.yaml` under folder GTT-V2-Sample-TrackSalesOrders-Service:

Replace {unique-identifier} with something unique like your company name or cloud foundry global account name.



```
1  ---
2  _schema-version: '3.1'
3  ID: gtt-v2-sample-track-salesorders-service
4  version: 2.2.0
5  modules:
6  - name: gtt-sample-track-salesorders-service
7    type: java
8    path: srv/
9    properties:
10     SPRING_PROFILES_ACTIVE: cloud
11     GTT_CORE_ENGINE_API_URL_FLP_BASED: https://{lbn-gtt-flp-base-url}/api
12     GTT_CORE_ENGINE_TECHNICAL_USER: {technical-user-name}
13     GTT_CORE_ENGINE_TECHNICAL_PWD: {technical-user-pwd}
14     HERE_MAP_KEY: {here-map-license-key}
15   parameters:
16     buildpack: java_buildpack
17     health-check-timeout: 180
18     host: gtt-sample-track-salesorders-service-{unique-identifier}
19   build-parameters:
20     ignore:
21     - "*.md"
22     build-result: target/*.jar
23     timeout: 10m
24   requires:
25   - name: lbn-gtt-sample-app-uaa
26
27   resources:
28   - name: lbn-gtt-sample-app-uaa
29     type: org.cloudfoundry.existing-service
30
```

Run following command to build mtar package:

mbt build

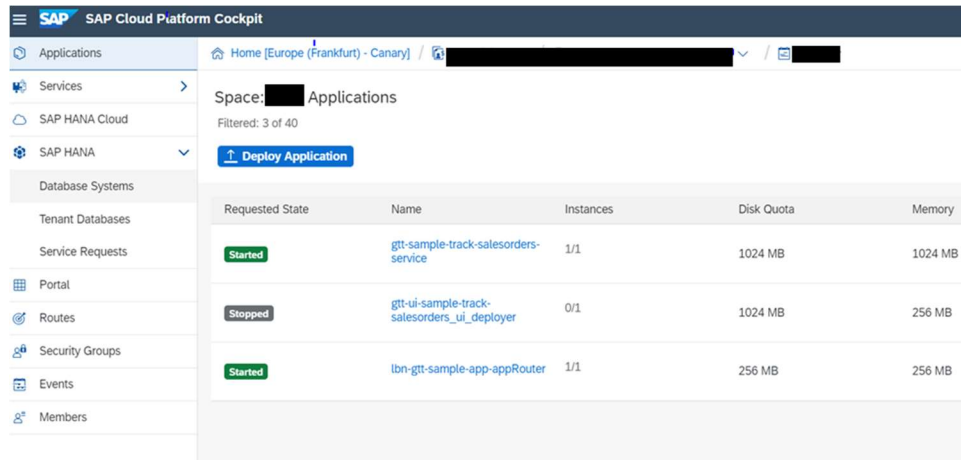
There should be `./mta_archives/gtt-v2-sample-track-salesorders-service_xxx.mtar` generated.

Deploy mtar package to Cloud Foundry by running 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 2.2.1 to 2.3.3, check the deployed apps on SAP Cloud Platform Cockpit.



2.4.6 Maintain Destination

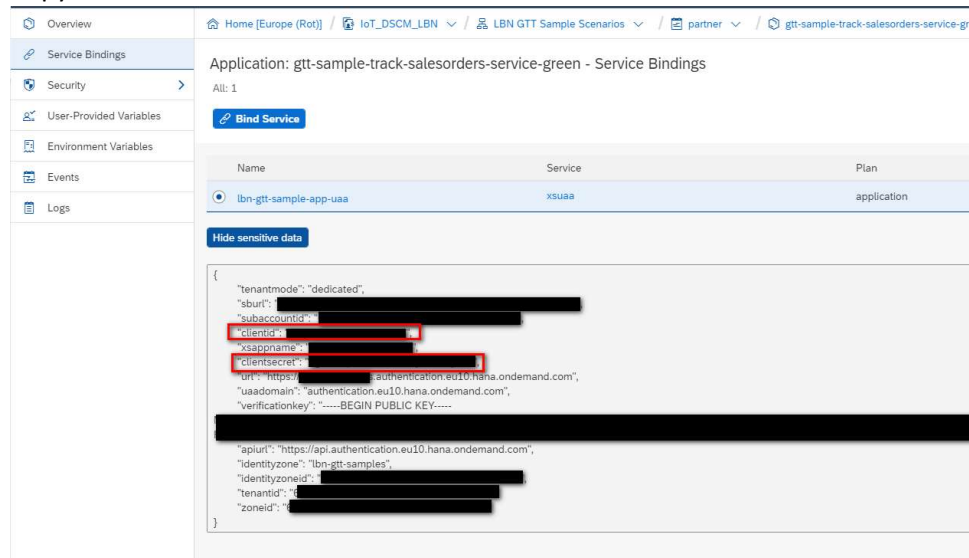
1. Fetch the UAA token

Go to the SOF backend application you deployed:

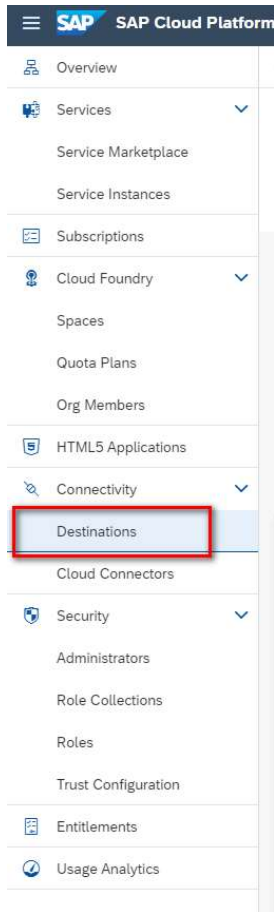


Find the environment of UAA

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



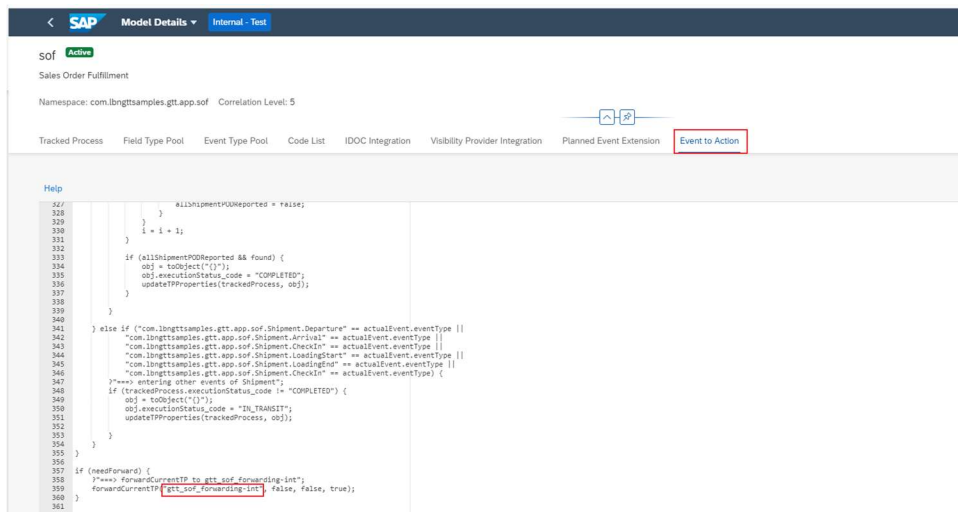
2. Go to “Destinations” Tab



3. Configure the destination

| | |
|-------------------|--|
| 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 previous step |
| Client Secret | Copied in previous step |
| Token Service URL | e.g. https://lbn-gtt-samples.authentication.eu10.hana.ondemand.com/oauth/token |

Note: The destination name in Event to Action script of SOF model should be updated if you customize the destination name other than “gtt_sof_forwarding_int”.



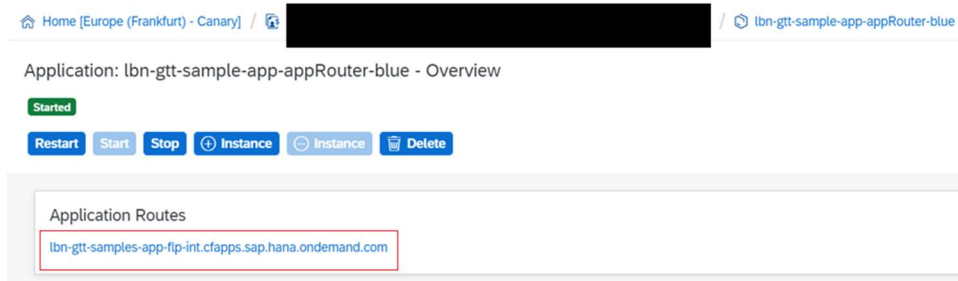
2.4.7 Maintain Roles and Users

- As shown in step 1.2, go to role of gtt-sample-all, and add the following roles:

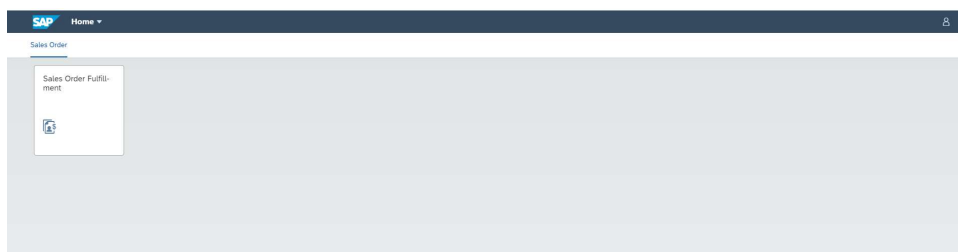
| Role | Application |
|------------------------------|----------------|
| SalesOrderFulfillmentAppUser | tt_sof_{space} |

2.4.8 Start SOF App from Fiori Launchpad

Get the Application Routes from SAP Cloud Foundry Cockpit,



Press the link of Application Routes and system browser will navigate to Fiori Launchpad of SOF:



Click on the Sales Order Fulfillment tile to open SOF sample app.

The screenshot shows the SAP Sales Order Fulfillment interface. At the top, there's a header bar with the SAP logo and 'Sales Order Fulfillment'. Below it, there's a search bar with 'Standard' selected. The main area contains a table of sales orders. The table has columns for Sales Order Number, Ship-To Party, Completion Rate, Overall Delay Impact (By Value), Net Value, and Is Delayed. There are four rows of data, each representing a different sales order.

| Sales Order Number | Ship-To Party | Completion Rate | Overall Delay Impact (By Value) | Net Value | Is Delayed |
|--------------------|---------------|-----------------|---------------------------------|-----------|------------|
| 9900023663 | 0000010105 | 265.00 EUR | 265.00 EUR | No | |
| 9900063395 | 0000010105 | 265.00 EUR | 265.00 EUR | No | |
| 9900015038 | | | | No | |
| 9900095285 | 0000010105 | 265.00 EUR | 265.00 EUR | No | |

3.Implement ERP extractor

View detailed slides at:

4.Other Configuration

4.1 Maintain Here map license.

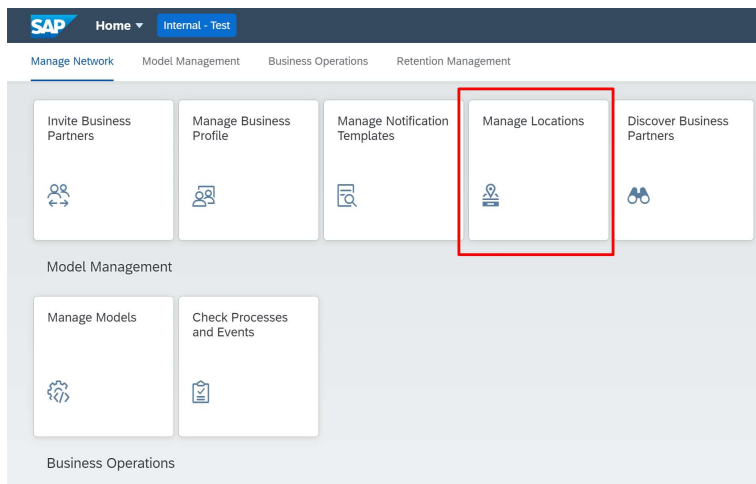
To have map view, please provide your URL with your incident in SAP BCP system under component “SCM-LBN-GTT-COR”, we will enable you with the Here map tile service manually.

For quick validation, you could also use other map service’s tile service as alternative.

4.2 Maintain location master

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

1. Open Manage Locations app in your LBN Track & Trace Option launchpad



2. Click “Create” to create 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

Detailed guide to maintain the required fields to keep the location be consistent with ERP location, please check *ERP Extractor Implementation Guide* for more hints.

< **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: