

## **APPENDIX: SYNCHRONIZE ACTUAL EVENTS BACK TO TM SYSTEM**

Your TM system for freight orders or freight bookings is either your:

- On-premise SAP Transportation Management (SAP TM) standalone system or
- Transportation Management in SAP S/4HANA (TM in SAP S/4HANA).

To send event notifications for freight orders or freight bookings from the GTT system to your TM system, you need to set up a connection between TM system and SAP Logistics Business Network, global track and trace option as follows:

1. Configure a web service in your TM system
2. Configure a connection in your SAP Cloud Connector
3. Define the destination service in your SAP BTP cockpit
4. Define the destination in Event to Action of your GTT model

The steps are explained in the following.

## 1. Configure a Web Service in Your TM System

### 1.1 Check if Interface `TransportationEventBulkNotification_In` is available in your TM system.

To receive event notifications, you must use the B2B message interface `TransportationEventBulkNotification_In` in your TM system. For more information about the required message enhancement, see SAP Notes [2721729](#) and [2743015](#).

### 1.2 Execute T-CODE `SOAMANAGER` in your TM system.

Under the [Service Administration](#) tab, select [Web Service Configuration](#).

### 1.3 Search for “`TransportationEventBulkNotification_In`” and select the service [/SCMTMS/TPEVTBNTFI](#) to enter the detail page.

[Design Time Object Search](#) [Configuration Search](#)

▼ Search criteria

Object Type

is

All

⊕ ⊖

Object Name

is


TRANSPORTATIONEVE

⊕ ⊖

Maximum Number of Results:

[Search](#) [Clear values](#) [Reset search criteria](#)

Search Result

Internal Name	Type
 <a href="#">/SCMTMS/TPEVTBNTFI</a>	Service Definition

### 1.4 In the [Configuration](#) tab, click [Create Service](#).

1.5 In the popup window, fill in your own service name and security settings and save the service you created.



## Configuration of New Binding for Service Definition '/SCMTMS/TPEVTBNTFI'



[Back](#) [Next](#) [Finish](#) [Cancel](#)

### Service Information

Service Name:\*

Service Description Text:

### Binding Information

New Binding Name:\*



## Configuration of New Binding for Service Definition '/SCMTMS/TPEVTBNTFI'



[Back](#) [Next](#) [Finish](#) [Cancel](#)

### Transport Guarantee

Transport Level: None

#### Transport Level Security

- ☒ None (http)
- ☐ SSL (https)

#### Message Level Security

- ☒ None
- ☐ Symmetric Message Signature and Encryption
- ☐ Asymmetric Message Signature
- ☐ Asymmetric Message Signature and Encryption
- ☐ Secure Conversation
- ☐ Extended Signature and Header Protection

### Authentication Settings

Authentication Level: Basic

#### Authentication Method

- ☐ No Authentication

#### Transport Channel Authentication

- ☒ User ID/Password
- ☐ X.509 SSL Client Certificate
- ☐ Single Sign On using SAP Assertion Ticket
- ☐ Single Sign On using SPNego

#### Message Authentication

- ☐ User ID/Password
- ☐ X.509 Certificate
- ☐ Single Sign On using SAML



## 2. Configure a Connection in Your SAP Cloud Connector

### 2.1 Ensure that you have installed SAP Cloud Connector.

For details about how to install it, see the installation guide of Cloud Connector on the SAP Help Portal.

<https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/57ae3d62f63440f7952e57bfcef948d3.html>

### 2.2 Log on to the Cloud Connector.

### 2.3 Add your subaccount into the Cloud Connector.

Click the [Add Subaccount](#) button.

Fill the required information in the pop-up window as instructed in the table below.

Fields	Value
Region	Specify the SAP BTP region that should be used
Subaccount	The ID of your target subaccount
Display Name	Enter a name
Subaccount User	BTP Login E-Mail of the user. Note that this user must be assigned to the role collection “Cloud Connector”.
Subaccount Password	The login password of the subaccount user for BTP
Location ID	Enter a short string without space for identifying this subaccount
Description	Provide the description

Note:

- The “subaccount user” must have a role for “Cloud Connector”. If you do not have it, contact your BTP administrator (or the one who has “security” related roles) to assign the user into the “Cloud Connector Administrator” role collection. Remember to choose “Default identity provider”. To add role collections to the subaccount user, see the following:

[https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/daca64dacc6148fcb5c70ed86082ef91.html#loiodaca64dacc6148fcb5c70ed86082ef91\\_table\\_default\\_role\\_collections\\_setB](https://help.sap.com/viewer/cca91383641e40ffbe03bdc78f00f681/Cloud/en-US/daca64dacc6148fcb5c70ed86082ef91.html#loiodaca64dacc6148fcb5c70ed86082ef91_table_default_role_collections_setB)

The top screenshot shows the SAP BTP Cockpit interface. The left sidebar has a menu with 'Role Collections' highlighted. The main area shows a table of role collections. The first row is highlighted with a red box:

Name	Description	Roles
Cloud Connector Administrator	Operate the data transmission tunnels used by the Cloud Connector.	Cloud Connector Administrator

The bottom screenshot shows the 'Role Collection: Cloud Connector Administrator - Overview' page. The 'EDIT MODE' button is visible. The description is 'Operate the data transmission tunnels used by the Cloud Connector.' Below this, there are tabs for 'Roles (1)', 'Users (0)', 'User Groups (0)', 'Attribute Mapping (0)', and 'Description'. The 'Roles (1)' tab is active. Below the tabs, there is a table with two columns: 'Role Name' and 'Role Template'. The first row is highlighted with a red box:

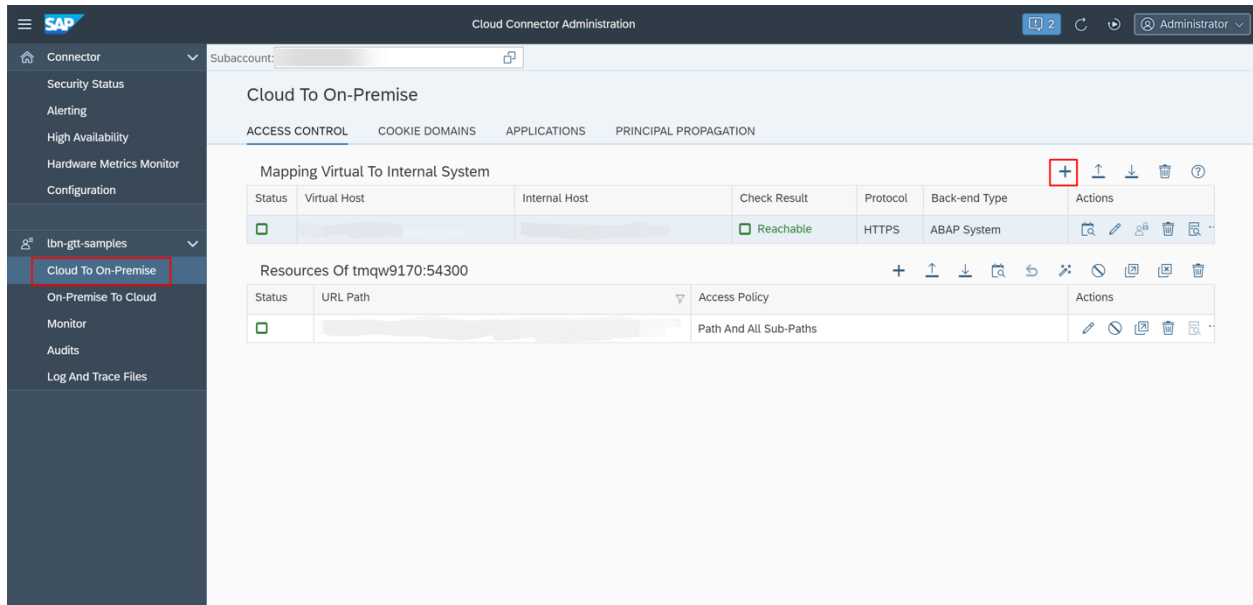
Role Name	Role Template
Cloud Connector Administrator	Cloud_Connector_Administrator

Below the table, there is a section for 'Users (0)'. At the bottom, there is a form with fields for 'ID', 'Identity Provider', 'E-Mail', and 'First Name'. The 'Identity Provider' dropdown menu is highlighted with a red box and shows 'Default identity provider' as the selected option.

- Always overwrite the “Location ID” and note it down for future reference.

2.4 After setting up the connection between SAP BTP and your Cloud Connector, set up the connection between your TM system and your cloud connector.

Open [Cloud To On-Premise](#). Click the [Create](#) icon in the [Mapping Virtual to Internal System](#) section.



In the pop-up window, fill in the **Virtual Host**, **Virtual Port**, **Internal Host**, and **Internal Port** of your TM systems as instructed in the table below.

Fields	Value
Back-end Type	ABAP System
Protocol	HTTPS
Virtual Host	Enter a virtual host name of your connection, such as "tm<TARGET_ERP_NAME>< TARGET_ERP_CLIENT>", Example: "tmUYR120" means we want to connect to UYR system with client 120
Virtual Port	Enter a virtual port of your connection
Internal Host	The URL of your TM system This information can be got from transaction "smgw". URL pattern: Idci<ERP_NAME>.wdf.sap.corp
Internal Port	The port of your TM system The default HTTPS port for Application Server ABAP is 44300. If it's not the default one, you should contact your system administrator.
Principal Type	Default
Host In Request Header	Default
Description	Add the description of this connection
Check Internal Host	Default



## 2.5 Add a resource for your mapping internal URL.

Choose the newly created mapping item in the previous step.

Click the Add icon and fill in the [URL Path](#) with the Calculated Access URL from Step 6 of “[Configure a Web Service in Your TM System](#)”. For the [Access Policy](#) field, choose “Path And All Sub-Paths”.

Cloud To On-Premise

ACCESS CONTROL   COOKIE DOMAINS   APPLICATIONS   PRINCIPAL PROPAGATION

Mapping Virtual To Internal System

Status	Virtual Host	Internal Host	Check Result	Protocol	Back-end Type
◇			✗ Not Reachable	HTTPS	Non-SAP System
◇	tmqk6120:54300	ldcsqk6.wdf.sap.corp:44300	◇ Unchecked	HTTPS	ABAP System
□			□ Reachable	HTTPS	ABAP System
□			□ Reachable	HTTPS	ABAP System

Resources Of tmqk6120:54300

+

↑

↓

Status	URL Path	Access Policy
No data		

### Add Resource

\*URL Path:

Active:

☒

WebSocket:

☐

Access Policy:

☐ Path Only (Sub-Paths Are Excluded)

☒ Path And All Sub-Paths

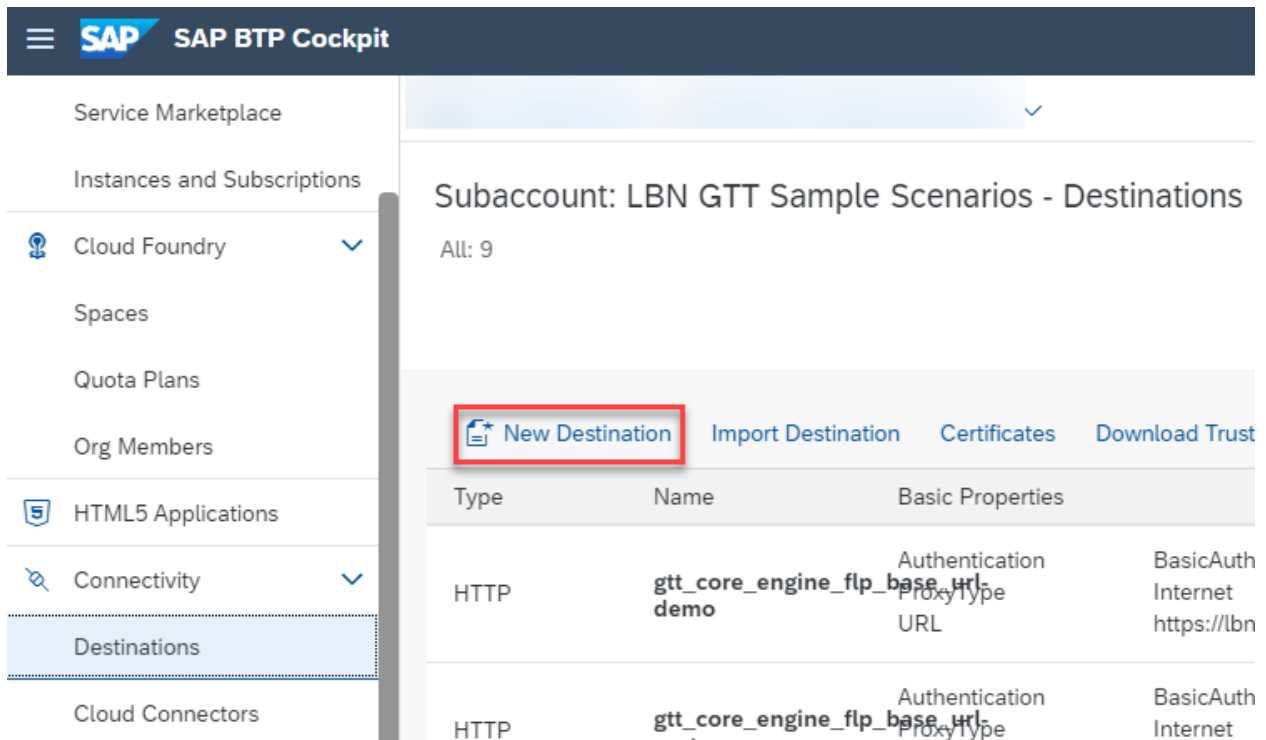
Description:

Save Cancel

### 3. Define the Destination Service in Your SAP BTP Cockpit

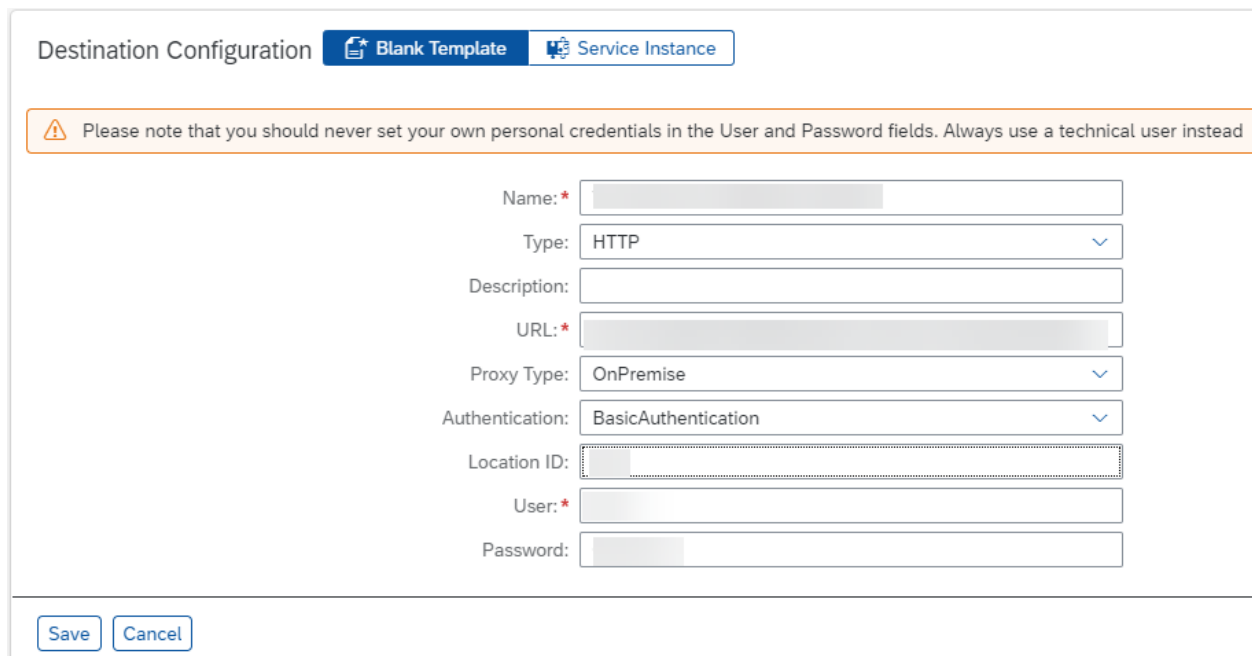
3.1 Go to your GTT subaccount that you used to subscribe in SAP BTP cockpit.

3.2 Create a destination service.



The screenshot shows the SAP BTP Cockpit interface. On the left is a navigation menu with options: Service Marketplace, Instances and Subscriptions, Cloud Foundry, Spaces, Quota Plans, Org Members, HTML5 Applications, Connectivity, Destinations (highlighted), and Cloud Connectors. The main area is titled 'Subaccount: LBN GTT Sample Scenarios - Destinations' and shows 'All: 9'. Below this is a toolbar with 'New Destination' (highlighted with a red box), 'Import Destination', 'Certificates', and 'Download Trust'. A table lists existing destinations:

Type	Name	Basic Properties
HTTP	gtt_core_engine_flp_base_url_demo	Authentication: BasicAuth Proxy Type: Internet URL: https://lbn
HTTP	gtt_core_engine_flp_base_url_demo	Authentication: BasicAuth Proxy Type: Internet



The screenshot shows the 'Destination Configuration' form. At the top, there are two tabs: 'Blank Template' (selected) and 'Service Instance'. Below the tabs is a warning message: 'Please note that you should never set your own personal credentials in the User and Password fields. Always use a technical user instead'. The form contains the following fields:

- Name: \*
- Type: HTTP (dropdown)
- Description:
- URL: \*
- Proxy Type: OnPremise (dropdown)
- Authentication: BasicAuthentication (dropdown)
- Location ID:
- User: \*
- Password:

At the bottom, there are 'Save' and 'Cancel' buttons.

Fill the required information in the pop-up window as instructed in the table below.

Field	Value
Name	Enter a name
Type	HTTP
Description	Provide some description
URL	The URL to the web service provided by TM. URL Pattern:  <u><a href="#">http://{virtual host in cloud connector}:{virtual port in cloud connector}{Calculated Access URL}</a></u>
Proxy Type	OnPremise
Authentication	BasicAuthentication
Location ID	The location ID that you filled in the step 3 of <a href="#">“Configure a Connection in Your SAP Cloud Connector”</a>
User and Password	The logon user and password to your TM system Usually, you should create a technical user for connection.

. Note:

- Note down the name of your destination service for future reference.
- The [Check Connection](#) button within [Destination Configuration](#) pop-up has no effect on “BasicAuthentication”. Therefore, when you click it, the success message prompted is not a guarantee for a correct configuration.

#### 4. Define the Destination in Event to Action of Your GTT Model

- 4.1 Open the Manage Models app and open the GTT standard model. In the **Event to Action** tab, overwrite the `destinationTMName` with your own destination name that you defined in the previous step.

For details, see [help.sap.com/gtt](https://help.sap.com/gtt) and search for *Guide for Model Administrators*.

[Help](#)

Standard Declaration

```
62 var objTrackedProcessUpdate = toObject("{}");
63 var needForward = false;
64
65 /* -----Forward to TM ----- */
66 var needForwardToTM = true;
67 var destinationTMName = "TO_QM9_179_STANDARD";
68 var msgObj = toObject("{}");
69 var eventObj = toObject("{}");
70
71 var estimatedArrivalTime = null;
72 var refPlannedEventMatchKey = null;
73 var estimatedArrival = null;
74
75 /* -----Scripts for Track Process ----- */
```

User Script Before Standard Script

```
1 destinationTMName = "TO_QM9_179_STANDARD";
```

Standard Script

```
276 /* -----Forward to TM system ----- */
277 if (trackedProcess != null && needForwardToTM &&
278     SHIPMENT_TRACKING_ID_TYPE == actualEvent.trackingIdType && eventForwardToTM) {
279     {
280         if (actualEvent.containsProperty("estimatedArrival") && actualEvent.containsProperty("refPlannedEventMatchKey")) {
281             refPlannedEventMatchKey = actualEvent.refPlannedEventMatchKey;
282             estimatedArrival = actualEvent.estimatedArrival;
283             var i = 0;
284             // Get the latest matched estimatedArrivalTime
285             while (i < estimatedArrival.size()) {
286                 if (refPlannedEventMatchKey == estimatedArrival[i].stopId) {
287                     estimatedArrivalTime = estimatedArrival[i].estimatedArrivalTime;
288                 }
289                 i = i + 1;
290             }
291         }
292     }
293 }
```