



PUBLIC

SAP Business Network, project44 Add-Ons

Configuration and Application Guide

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1. Introduction

This document explains the required organizational and configuration steps for the consumption of project44 services through SAP Business Network Freight Collaboration as well as SAP Business Network Global Track and Trace.

For tracking-related scenarios, SAP recommends using SAP Business Network Global Track and Trace.

SAP is extending the reach of the SAP Business Network with project44 add-ons that provide real-time visibility content.

These add-on services leverage the project44 multi-mode carrier network with its established connectivity to carrier and logistics provider systems, truck telematics, electronic logging devices, and so on.

With the add-ons for project44 visibility services, SAP Business Network users can benefit from the availability of actual shipment execution insights, such as real-time shipment location and event status for full truck loads, and real-time milestone status for less than truck load shipments. This allows for a holistic view of both planned and actual shipment status, as well as automatic business event detection.

project44 visibility content with business partner systems are available to SAP Business Network users through supplementary, add-on licenses from SAP.

SAP Business Network provides tracking capabilities with the integration of project44 content, covered by the following add-ons:

- SAP Business Network, project44 FTL visibility add-on
- SAP Business Network, project44 LTL visibility add-on
- SAP Business Network, project44 ocean visibility add-on
- SAP Business Network, project44 air visibility add-on
- SAP Business Network, project44 parcel visibility add-on
- SAP Business Network, project44 rail visibility add-on*

* No standard integration into SAP Business Network for Logistics available; custom integrations provided by project44, with proper implementation project scoping exercise.

For more information on how to leverage the project44 add-ons for customer projects, see the slides for [SAP Business Network Global Track and Trace and project44](#).

SAP Business Network Freight Collaboration enables the viewing of events related to a freight order in the *Track Freight Movement* app. This app lets you view the status of your shipment with regard to the planned events and the geolocations of a vehicle. It displays automated visibility data from a supported visibility provider, if your carrier provides the data. The visibility data includes geographic location data and actual events (for example, actual departure and arrival times, delays). The app displays visibility data for events with the event codes for *departure*, *arrival at destination*, *estimated time of arrival (ETA)* and *delayed*. Only the tracking-related data of a freight order is passed into the app, for example, freight order ID, stop locations, and events.

The visibility data displayed in the app is also sent to your SAP Transportation Management (SAP TM) or SAP S/4HANA system and the *Freight Orders for Reporting* app.

The *Freight Order for Reporting* app in SAP Business Network for Logistics enables carriers to manually report events. The manually reported data includes actual events (departures, arrivals, ETA, and delays). The app also allows carriers to attach, if required, proof of pick-up and proof of delivery documents. The manually reported data tracked by the app is also sent to your SAP Transportation Management (SAP TM) or SAP S/4HANA system.

2. Prerequisites (SAP Business Network for Logistics setup and SAP S/4HANA integration)

For SAP Business Network Freight Collaboration:

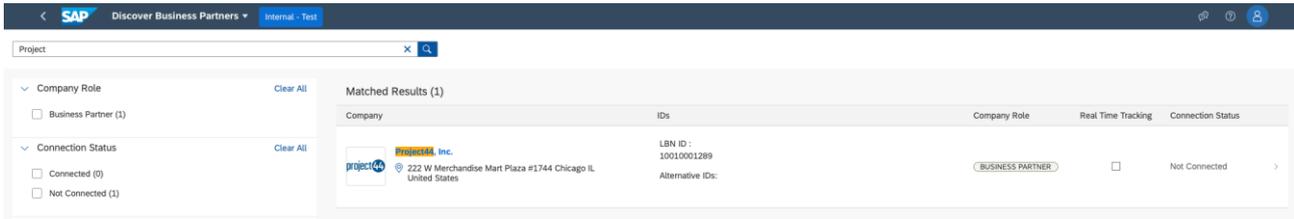
- Acquisition of a project44 license.
- Integration setup from your backend system to SAP Business Network for Logistics as mentioned in the [Connectivity](#) chapter of the *Administration Guide for Shippers*.
- Setup of SAP Business Network Freight Collaboration shipper tenant, as mentioned in the [Onboarding](#) chapter of the *Administration Guide for Shippers*.

For SAP Business Network Global Track and Trace:

- Acquisition of a project44 license.
- Carriers must be onboarded onto project44. Contact your project44 solution architect or customer success manager for onboarding details.
- Setup of SAP Business Network Global Track and Trace solution owner tenant as mentioned in the [Onboarding](#) chapter of the *Administration Guide for Solution Owners*.

3. Connecting with project44

You should find project44 in the *Discover Business Partners* app and request a connection.



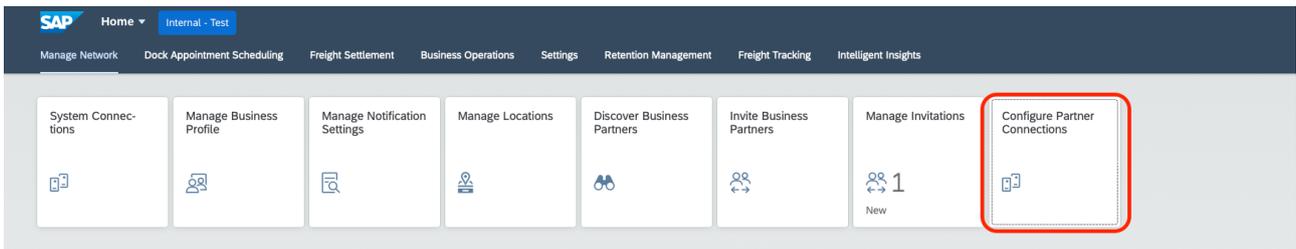
Below project44 connections are available in the *Discover Business Partners* app based on your test or production tenants. You must connect to request connection to project44.

SAP Data Center	project44 Environment	Name	LBN ID	Mode
AWS data center for Europe (EU10)	North America	Project44, Inc.	10010001289 (Test)	Road FTL
		Project44, Inc.	10000478 (Prod)	Road FTL
		Project44, Inc. - Unified	10010003289 (Test)	Road LTL, Ocean, Air, Parcel
		Project44, Inc. - Unified	10010003288 (Prod)	Road LTL, Ocean, Air, Parcel
	Europe	Project44, Inc. - EU Test	10020002101 (Test)	Road LTL, Ocean, Air, Parcel
		Project44, Inc. - EU	10020002066 (Prod)	Road LTL, Ocean, Air, Parcel
Microsoft Azure data center for US West (US20)	North America	Project44, Inc. - Legacy	20020001038 (Test)	Road FTL
		Project44, Inc. - Legacy NA	20020001039 (Prod)	Road FTL
		Project44, Inc. - Unified	20020001036 (Test)	Road LTL, Ocean, Air, Parcel
		Project44, Inc. - Unified	20020001035 (Prod)	Road LTL, Ocean, Air, Parcel

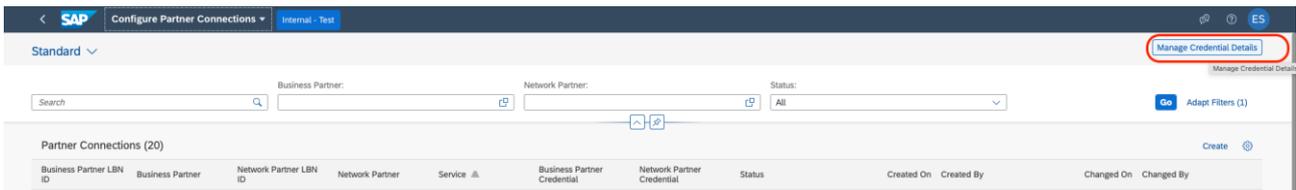
After project44 confirms the connection, a project44 account is created and credentials are issued to you by email from project44.

These credentials should be maintained by you in the *Configure Partner Connections* app:

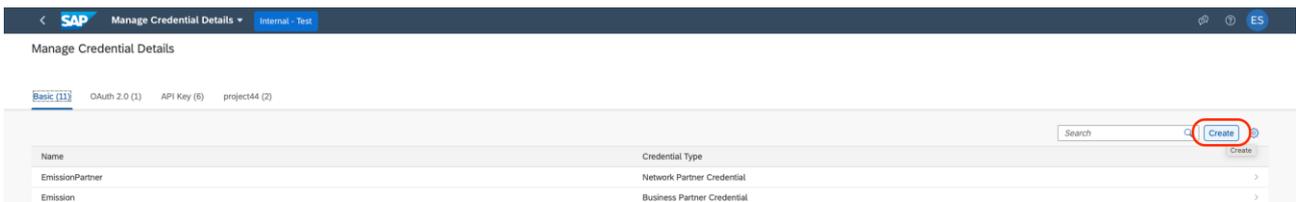
Step 1



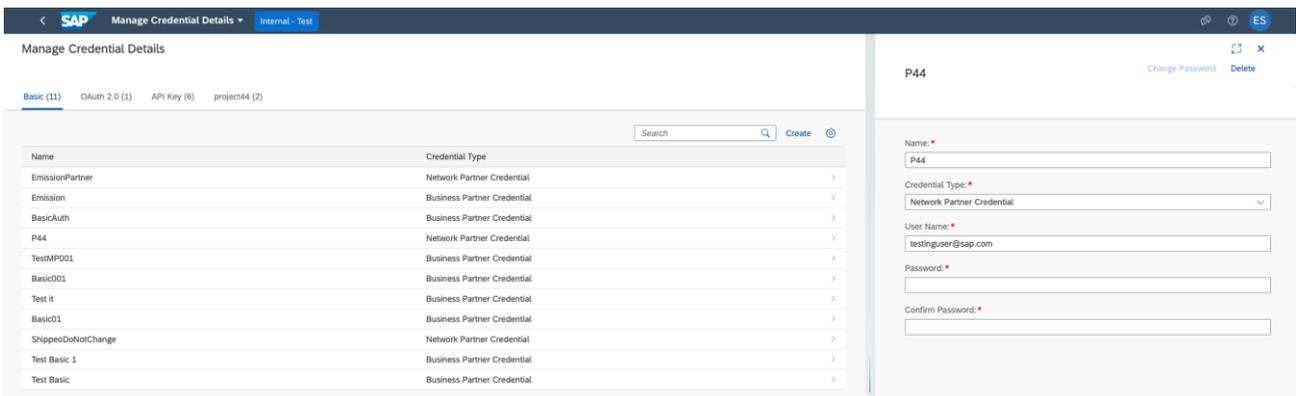
Step 2



Step 3



Step 4



4. Onboarding of Business Partners to SAP Business Network for Logistics and project44

For tracking-related scenarios, SAP recommends using SAP Business Network Global Track and Trace. This section is only relevant for B2B collaboration.

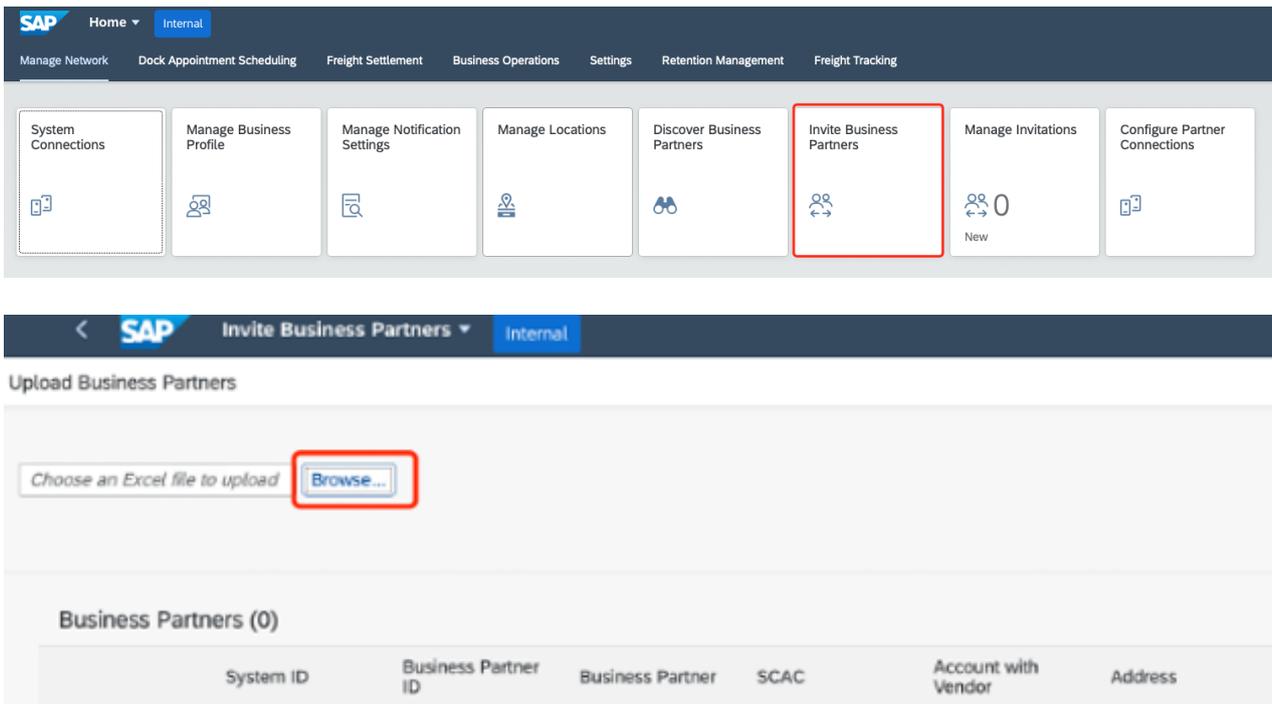
Prerequisites

As mentioned above, when your project44 account was created, project44 would have issued you with credentials by email. These credentials should have been added in the *Configure Partner Connections* app. If this is not the case, go back and carry out the steps in section 3 above.

Onboarding Methods (Mandatory for SAP Business Network Freight Collaboration)

You need to have invited all business partners using project44 services to SAP Business Network for Logistics and ensured that they have been fully onboarded. This is the standard onboarding process that is outlined in the [Invite Business Partners](#) section of the *Administration Guide for Shippers* of SAP Business Network Freight Collaboration. The two methods that can be used for this step are detailed below. Our customer support team is available to assist you with any difficulties you experience.

Method 1: Mass upload



The screenshot displays the SAP Business Network interface. The top navigation bar includes 'SAP', 'Home', and 'Internal'. Below this, a secondary navigation bar lists various modules: 'Manage Network', 'Dock Appointment Scheduling', 'Freight Settlement', 'Business Operations', 'Settings', 'Retention Management', and 'Freight Tracking'. A row of eight tiles is shown below, with the 'Invite Business Partners' tile highlighted by a red border. The 'Invite Business Partners' tile shows a red box around the 'New' indicator.

The second screenshot shows the 'Invite Business Partners' page. The top navigation bar includes 'SAP', 'Invite Business Partners', and 'Internal'. Below this, the page title is 'Upload Business Partners'. A text input field contains the placeholder text 'Choose an Excel file to upload', and a 'Browse...' button is highlighted with a red box. Below the input field, the page shows a table header for 'Business Partners (0)' with columns: 'System ID', 'Business Partner ID', 'Business Partner', 'SCAC', 'Account with Vendor', and 'Address'.

SAP Invite Business Partners Internal

Standard Download Excel Template Upload Business Partners Discover Business Partners

Business Partner ID: Invite: SCAC: Email: Adapt Filters

To Be Submitted (3) In Progress (27) Accepted (8) Rejected (13)

Business Partners Submit Delete Add Invitee

System ID	Business Partner ID	Invitee	Company Role	SCAC	Phone Number	Email	Language	City	Country/Region
<input checked="" type="checkbox"/>	123	456	Carrier Name	Business Partner		hrshaa@163.com	English	Dalian	China

Zip Code: Status: New

Method 2: Manual upload

SAP Home Internal

Manage Network Dock Appointment Scheduling Freight Settlement Business Operations Settings Retention Management Freight Tracking

System Connections Manage Business Profile Manage Notification Settings Manage Locations Discover Business Partners Invite Business Partners Manage Invitations Configure Partner Connections

SAP Invite Business Partners Internal

Standard Download Excel Template Upload Business Partners Discover Business Partners

Business Partner ID: Invite: SCAC: Email: Adapt Filters

To Be Submitted (2) In Progress (27) Accepted (8) Rejected (13)

Business Partners Submit Delete Add Invitee

System ID	Business Partner ID	Invitee	Company Role	SCAC	Phone Number	Email	Language	City
<input type="checkbox"/>								

Business Partner Shipper

SAP Invite Business Partners Internal

Add Invitee

BUSINESS PARTNER

System ID: Business Partner ID: Business Partner: Email: Language: English Address: City: Country/Region: SCAC: Account with Vendor: Phone Number: Zip Code: Comment:

Save Cancel

SAP Invite Business Partners Internal

Standard Download Excel Template Upload Business Partners Discover Business Partners

Business Partner ID: Invite: SCAC: Email: Adapt Filters

To Be Submitted (3) In Progress (27) Accepted (8) Rejected (13)

Business Partners Submit Delete Add Invitee

System ID	Business Partner ID	Invitee	Company Role	SCAC	Phone Number	Email	Language	City	Country/Region
<input checked="" type="checkbox"/>	123	456	Carrier Name	Business Partner		hrshaa@163.com	English	Dalian	China

Zip Code: Status: New

After all business partners have been onboarded onto SAP Business Network for Logistics, you need to add the business partners' LBN IDs to your master data.

Filters Carrier ID: Carrier: SCAC Code: Email: Hide Filter Bar Clear

New (0) In Progress (7) Accepted (11) Rejected (0)

Download Excel Template Upload Carriers Download Carriers

System ID	Carrier ID	Carrier	SCAC Code	Phone Number	Email	City	Country/Region	Zip Code	Network ID
<input type="checkbox"/>	QM7CLNT910	1009092	MIK Transportation	+4915143819981	m.kraenzler@sap.com	Waldorf	Germany	69190	10000031

ABAP Editor: Initial Screen

Program: /BICREMS2/R_LBN_ID_BP_DFB Create

Subobjects: Source code, Variants, Attributes, Text elements, Documentation

Update LBN Id in Business Partner Identification

Upload CSV File: C:\Users\DOM1461\Desktop\Accepted_Carrier_2019-2-25T4_32_17PM.csv

Execute in Foreground Mode / Execute in Background Mode

SAP Locator On/Off Person Organization Group Open BP Switch Between Display and Change

Business Partner: 1009092 MIK Transportation / 69190 Waldorf

Display in BP role: Carrier

Address Address Overview Identification Control Payment Transactions Status

Identification Numbers

External BP Number:

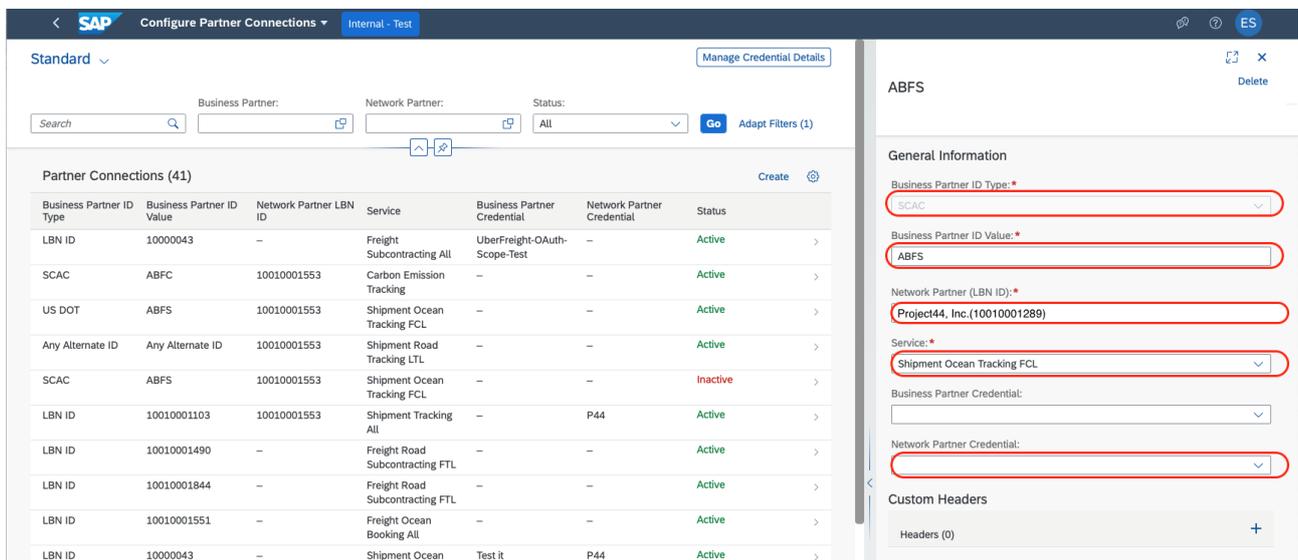
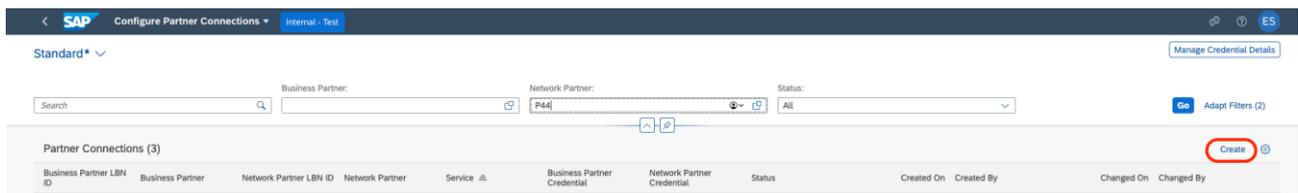
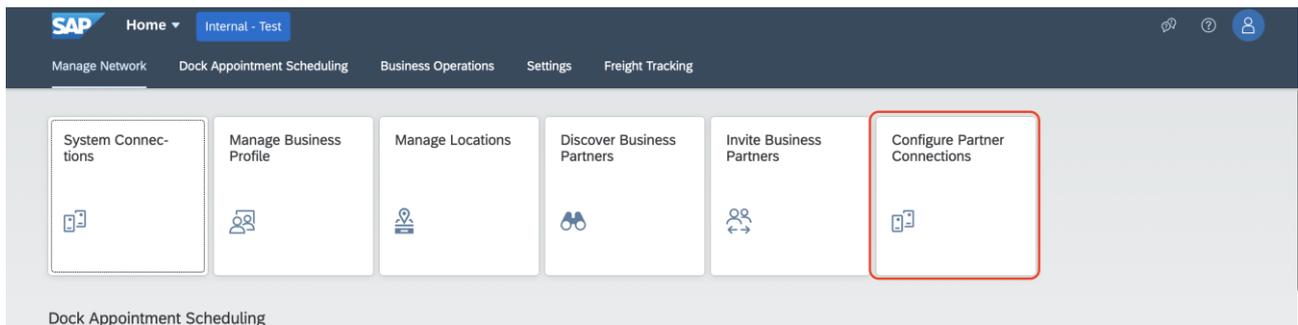
IDType	Description	Identification Number	Responsible Institution
<input type="radio"/>	LBN001 LBN Identification	10000031	

5. Configuring Connection Between Business Partners and project44

If all your business partners that use project44 services have LBN IDs, you are now ready to create a partner connection for each business partner. However, you only need to do so if the credentials issued by your business partner are specifically for you. If your business partner has implemented APIs published by SAP Business Network for Logistics with generic credentials, then you should already be able to connect with their external system.

Creating a Partner Connection Specific to Each Service for Each Business Partner

The partner connection with each business partner is created in the *Configure Partner Connections* app.



When filling out the Create New Partner Connection dialog, the Network Partner Credential is the project44 credential that was added as a basic network partner credential in Section 3 above. The Service is the project44 service with which the business partner is connected. And so, the partner connection in the Configure Partner Connections app is created unique to each service and for each business partner ID type and alternate ID. Thus, you map the business partner, project44, service,

and credentials together to route calls from SAP Business Network for Logistics to project44. For more details, refer to [Configure Partner Connections \(freight collaboration\)](#) or [Configure Partner Connections \(global track and trace\)](#).

Additional Set-Up for LTL Tracking

Note: *This set-up is only required when you choose Project44, Inc. as your business partner and want to use the road LTL tracking service. We recommend you choose Project44, Inc. - Unified as your business partner, and then you can skip this set-up.*

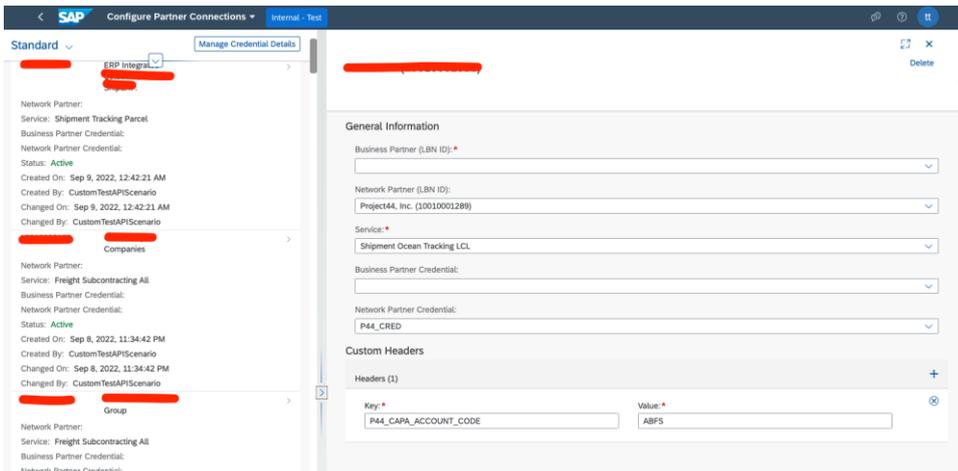
For LTL tracking, specific additional information for business partners connected to project44 services has to be maintained. This information is used to map the business partner's LBN ID to the capacity provider¹ account on the project44 side. The capacity provider account is used by project44 to retrieve tracking information from the business partner's system.

There are two methods: one for if you have already created the project44 capacity provider account for the carrier in project44 the other for if you haven't.

Method 1: Already created project44 capacity provider account

If the project44 capacity provider account is already created in project44, you can maintain the logistics service provider account code (or project44 capacity provider account code) as a custom header. You would have already configured a partner connection in the Configure Partner Connections app for each of the carrier LBN IDs. Within each connection, you have the option of maintaining custom headers. Before adding the custom header for the logistics service provider account code (project44 capacity provider account code), delete anything in the Business Partner Credential field. This field must be empty. Add a new custom header and enter P44_CAPA_ACCOUNT_CODE in the Key field. Then enter the logistics service provider account code (project44 capacity provider account code) in the Value field. Please note that the capacity provider account should be created in the Default group in project44 in order for this to work.

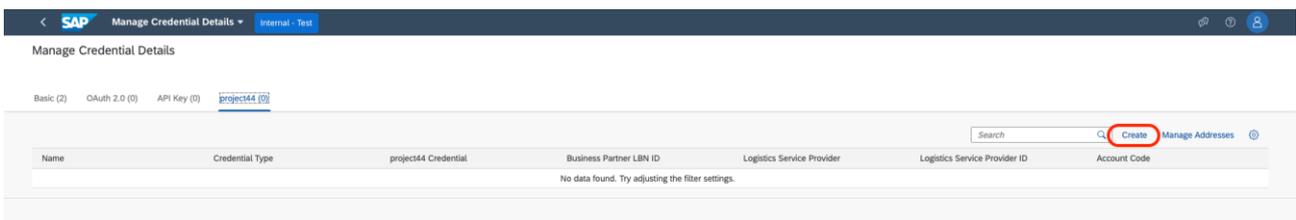
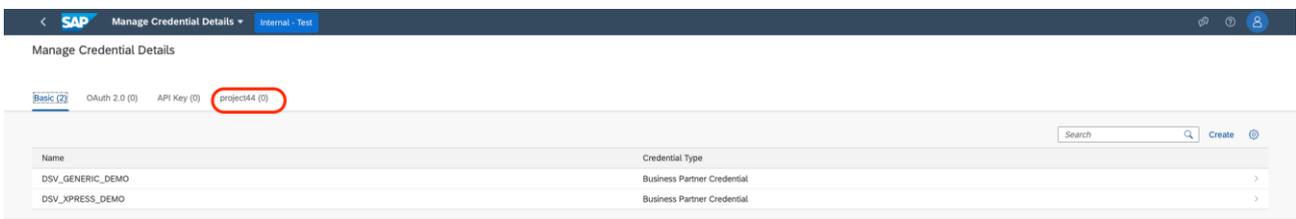
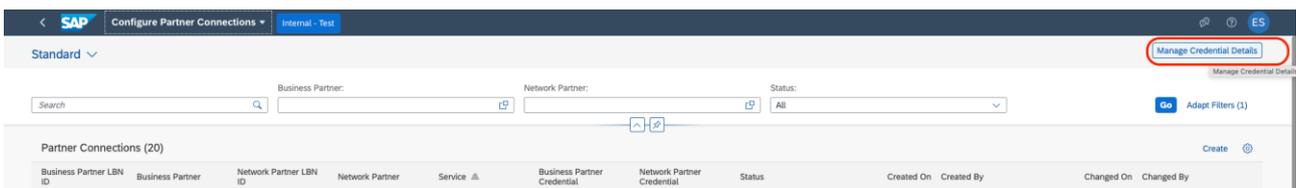
¹ A "capacity provider" in project44 is referred to as a "logistics service provider" in SAP Business Network for Logistics. Likewise, a "capacity provider account code" in project44 is referred to as a "logistics service provider account code" in SAP Business Network for Logistics.



Method 2: No project44 capacity provider account yet

If the capacity provider account for the carrier is not yet created in project44, you can create it with the Configure Partner Connections app in Manage Credential Details under the project44 tab. The value you enter in the Logistics Service Provider Account Code field is what will become the project44 capacity provider account code. The dialog is dynamic and the fields to be maintained will vary from carrier to carrier. The data you enter in the Create New project44 Account dialog is used to create a new capacity provider account in project44 which will be used to retrieve tracking information from the carrier's system. You need to get in touch with your project44 technical contact to get the necessary information for each carrier.

In the Manage Addresses view within this app, you – as the shipper – can add addresses that will appear in the drop-down list for Bill-To Address fields within the app. Additionally, you would have to maintain Capacity provider account for specific carriers for LTL tracking.



6. Scenario Specific Configuration for SAP Business Network Freight Collaboration

With the B2B collaboration add-on, SAP Business Network enables the collaborative processing of FTL and LTL shipments with carriers.

Note:

For tracking-related scenarios, SAP recommends using SAP Business Network Global Track and Trace. To differentiate different scenarios, SAP Business Network for Logistics relies on the following fields:

- Transportation Mode – The transportation mode must be maintained in the freight order document (SAP Transportation Management standalone or Transportation Management embedded in SAP S/4HANA)
- Shipping type –The shipping type must be maintained in the freight order document (SAP Transportation Management standalone or Transportation Management embedded in SAP S/4HANA)

Based on the scenario, additional data is required from the SAP Transportation Management (SAP TM) system:

- Road FTL Tracking*
- Road FTL Tendering & Subcontracting*
- Road LTL Subcontracting*
- Ocean tracking*
 - project44 has to mark the webhook as the default for ocean tracking scenarios. This has to be done one time with an email request to project44 [implementation@project44.com]

FTL Tendering and Subcontracting Scenario

As the first step in the tendering process, you – as an ordering party – create a request for freight quotation (RFQ) in your SAP TM system. When you publish this RFQ, the system sends the RFQ to SAP Business Network for Logistics. SAP Business Network for Logistics uses the data in the RFQ and creates a tendered shipment and a tender in project44 with the details of the origin, destination, truck type, and so on.

The system creates the tender and tendered shipment. You can view the tendered shipment ID and tender ID in the document reference details of the RFQ.

Note that the carrier for which you have created the RFQ must be a project44 carrier. This carrier can view this tender and send one of the following responses:

- **Accept**
- **Accept with Rate Quote**
- **Reject**

Once the carrier responds to the tender from the project44 system, SAP Business Network for Logistics creates a quotation based on this response and sends it to your SAP TM system. You can either award or cancel the quotation.

When you accept the response, the SAP TM system sends a freight order for confirmation to the carrier in SAP Business Network for Logistics for subcontracting which in turn triggers a dispatch in the project44 system. When you send a cancellation, the system cancels the dispatch in the project44 system.

When you cancel the RFQ, the system updates the status to cancelled in SAP Business Network for Logistics and deletes the corresponding tendered shipment and tender in project44.

Response Required Scenario

In your SAP TM system, you can control whether you require a response from your carrier before the carrier starts the dispatch. If you do not require a response from the carrier, the carrier begins the dispatch directly after the system creates an RFQ. If you require a response, then the carrier triggers the dispatch only after the carrier receives the freight order for confirmation.

LTL Subcontracting Scenario

In the LTL scenario, you have precontracted rates with the carrier. Hence the carrier starts the dispatch directly without any RFQs.

Once you send the freight order from your SAP TM system, the system creates a shipment in project44, and the carrier begins the dispatch. Note that if you cancel the freight order in your SAP TM system, using the shipment ID, the system cancels the dispatched shipment in project44.

SAP Business Network, project44 FTL visibility add-on

All freight orders created in your SAP TM or SAP S/4HANA system can be tracked with the project44 add-on for FTL visibility. You must ensure that the carrier is assigned to the freight order and that the carrier is available in the project44 network. When the freight order is set to *In Execution*, it is sent to SAP Business Network for Logistics, and you can display it in the *Track Freight Movement* app.

To use FTL tracking in SAP Business Network for Logistics, you must provide the following information in your SAP TM or SAP S/4HANA system when creating the freight order:

- On the *Stages* tab:
 - *Source Location* and *Destination Location*
Also, either the *Planned Departure Time* or *Planned Arrival Time* must be in the future, and the arrival time must be later than the departure time.
- On the *Terms and Conditions* tab: *Shipping Type* must be FTL (18).
- On the *General Data* tab: *Registration Country/No.*

Note: It is now possible in LBN for shippers to maintain a default shipping type in the *Assign Codes* app. So, when no shipping type is maintained for a shipment, the default value will be used, assuming that one has been maintained.

The following events are supported for FTL:

- Departure
- Delay
- Arrival at Destination
- Expected Time of Arrival

The reported events are sent to your SAP TM or SAP S/4HANA system and are visible on the *Execution* tab of the freight order.

SAP Business Network, project44 LTL visibility add-on

All freight orders created in your SAP TM or SAP S/4HANA system can be tracked with the project44 add-on for LTL visibility. You must ensure that the carrier is assigned to the freight order and that the carrier is available in the project44 network. When the freight order is set to *In Execution*, it is sent to SAP Business Network for Logistics, and you can display it in the *Track Freight Movement* app.

To use LTL tracking in SAP Business Network for Logistics, you must provide the following information in your SAP TM or SAP S/4HANA system when creating the freight order:

- **Under the *Stages* tab:**

Source Location and *Destination Location*.

The arrival time must be further in the future than the departure time. It is only possible for the departure time to be in the past. The arrival time, at least, must be in the future.

Only one stage (with source location and destination location) is supported within the LTL process. Multiple stages are not supported.

- **Under the *Terms and Conditions* tab:**

Shipping Type must be LTL (17).

- **Under the *Document References* tab:**

Tracking can only start when the freight order that's sent to the carrier includes the following in the *Document Types for Business Transaction* field:

- PRO number: 'BN' (Consignment identifier, carrier assigned)
- Bill of lading: 'T50' (Bill of Lading)

Note: It is now possible in LBN for shippers to maintain a default shipping type in the *Assign Codes* app. So, when no shipping type is maintained for a shipment, the default value will be used, assuming that one has been maintained.

The following events are supported for LTL:

- Departure
- Delay
- Arrival at Destination

The reported events are sent to your SAP TM or SAP S/4HANA system and are visible under the *Execution* tab of the freight order. SAP Business Network for Logistics receives the attachment related to an event from project44 as a URL for proof of pickup and proof of delivery. This URL will be accessible in the *Track Freight Movement* app.

Additionally, the carrier can upload the attachments in the *Freight Orders for Reporting* app.

SAP Business Network, project44 ocean visibility add-on

All ocean bookings created in your SAP TM or SAP S/4HANA system can be tracked with the project44 add-on for ocean visibility. You must ensure that the carrier is assigned to the ocean booking and that the carrier is available in the project44 network. When the ocean booking is set to *In Execution*, it is sent to SAP Business Network for Logistics, and you can display it in the *Track Freight Movements* app.

To use ocean tracking in SAP Business Network for Logistics, you must provide the following information in your SAP TM or SAP S/4HANA system when creating the freight order:

If you want your carriers to upload attachments (proof of pick-up, proof of delivery) as part of the reporting, they can do so in the *Freight Orders for Reporting* app.

- Under the *Stages* tab:
Source Location and *Destination Location*.
The locations should mandatorily have a UN/LOCODE maintained. This is later used to correlate the events reported by project44 onto TM planned events.
Only one stage (with source location and destination location) is supported. Multiple stages are not supported.
- Under the *Terms and Conditions* tab:
Shipping Type must be FCL (full container load) or LCL (less than container load).
- Under the *Notes* tab:
A note with text type 'Container ID' must be created with the container ID of the ocean booking as the value. This is a custom text type. Note that you must separate multiple container IDs using commas.

Note: It is now possible in LBN for shippers to maintain a default shipping type in the *Assign Codes* app. So, when no shipping type is maintained for a shipment, the default value will be used, assuming that one has been maintained.

The system supports multiple events for ocean tracking. The following are some of the important events:

- Departure
- Arrival at Destination
- Gate-In End
- Gate-Out End
- Loading End
- Unloading End
- Return

The reported events are sent to your SAP TM or SAP S/4HANA system and are visible on the *Execution* tab of the freight order. If you want your carriers to upload attachments (proof of pickup, proof of delivery) as part of the reporting, they can do so in the *Freight Orders for Reporting* app.

7. General Configuration for SAP Business Network Global Track and Trace

In the *Manage Models* app of SAP Business Network Global Track and Trace, the visibility provider integration information is already maintained for you in the GTT standard model “gtttf1”.

The screenshot shows the SAP Manage Models interface for the 'gtttf1' model. The 'Visibility Provider Integration' tab is selected. The 'Tracked Process' is set to 'Shipment' and the 'Tracking Indicator' is '01 (Shipment Tracking)'. The 'Integration Switch' is turned ON. The 'Tracked Process / Events (31)' table lists various events and their corresponding LBN Event Types. The 'Standard Model Fields' table lists LBN Tracking Fields and their corresponding SAP Business Network for Logistics fields.

Name	LBN Event Type
ShipmentEvent	
LoadingStart	LOAD_BEGIN
POD	POD
Departure	DEPARTURE
Arrival	ARRIV_DEST
LoadingEnd	LOAD_END
Checkin	
GateInStart	GATEIN_START
GateInEnd	GATEIN_END
GateOutStart	GATEOUT_START
GateOutEnd	GATEOUT_END
UnloadingStart	UNLOAD_BEGIN
UnloadingEnd	UNLOAD_END

LBN Tracking Fields	Field
VP Document ID	trackId
Carrier LBN ID *	serviceAgentLbnId
Ordering Party Name	
Consignee Name	
Quantity of Total Pieces	cargoQuantity
Quantity of Total Pieces Unit	quantityUoM
Transportation Mode *	transportationMode
Transportation Means Standard Code	transportMeans
> Transportation Means Tracked Objects	trackedObjects
Dangerous Goods Indicator	dangerousGoods

But if you want to integrate with your visibility provider in a user model or map user-defined fields in the standard model, do the following:

1. Launch the *Manage Models* app. Select a model.
2. Go to the *Visibility Provider Integration* tab and open the edit mode.
3. Select a tracked process. Turn on the *Integration Switch*.
4. Choose 01(Shipment Tracking) for the *Tracking Indicator*.
5. In the *Tracked Process / Events* list on the left, you can see the tracked process event and event types. Use the value help to fill in the SAP Business Network for Logistics event type for actual events.
6. Select an event in the list, then use the value help to fill in the fields or SAP Business Network for Logistics tracking fields on the right.
7. Save and deploy the model.

8. Testing in SAP Business Network Freight Collaboration

Tracking Initialization – flow from SAP Business Network for Logistics to project44:

Trigger a freight order out from TM system by setting Execution status or from ECC. The order will be pushed to the project44 system. Successful orders sent can be verified by logging in to project44. The URL to log in to project44 (<https://na12.api.project44.com>) would likely have been maintained by you in the *Configure Partner Connections* app.

Event flow from project44:

You may get events from the project44 system based on your requirements. Simulated events are supported only for Road FTL. For other scenarios, the testing has to be done manually with project44.

Road FTL:

The simulation of events must be requested from SAP with an incident categorized by component SBN-LBN-INT. To create an incident, open <https://launchpad.support.sap.com/#incident/create>. And this option is available only in the shipper test tenant.

To test with real road orders, you might have to obtain the vehicle ID, license plate (truck) or driver mobile no. from project44 which are relevant for your carrier executing the orders. As mentioned above, these vehicle identifiers have to be maintained in the SAP TM or ECC system. This information has to flow from your system to SAP Business Network for Logistics to project44 during tracking initialization. When the initialization of tracking is done in the p44 system, the events will flow to your system. To monitor if the messages are being processed from SAP Business Network for Logistics as expected, you may view them in the *Manage Integration Logs* app (freight collaboration) or in the *Track Freight Movement* app (freight collaboration).

Example of how to maintain Shipment in TM to maintain these identifiers:

The screenshot shows the 'General Data' tab of a shipment in SAP S/4HANA. The shipment is identified as a 'Truck'. The 'Means of Transport' is set to '0001' (Truck). The 'Vehicle' is 'MTH_TRUCK01'. The 'Registration Country/Region No.' is 'DE', and the 'License Plate' is 'TEST_LICENSEPLATE'. Capacity information is provided for both mass and volume, with a maximum utilization of 0%.

Field	Value
Means of Transport:	0001 (Truck)
Vehicle:	MTH_TRUCK01
Registration Country/Region No.:	DE (License Plate: TEST_LICENSEPLATE)
Total/Consumed/Remaining Capacity (Mass):	10 / / 10 TO
Total/Consumed/Remaining Capacity (Volu...):	/ / M3
Maximum Utilization:	0%

Road LTL:

Simulation currently not available

You must obtain a real (not test) Shipment identifier (T50 – Bill of lading, T67- Pro Number) from project44 and maintain it in the SAP TM system in the document reference section of the freight

order or shipment. This information must be sent during initialization. After project44 receives it and when the actual event occurs, the events from project44 will be sent which can be validated using the Manage Integration Logs app.

Please note that a capacity provider account has to be maintained for LTL tracking. This is elaborated upon in Section 5 above.

Example of how to maintain Shipment in SAP TM to maintain these identifiers:

Document References

Insert 

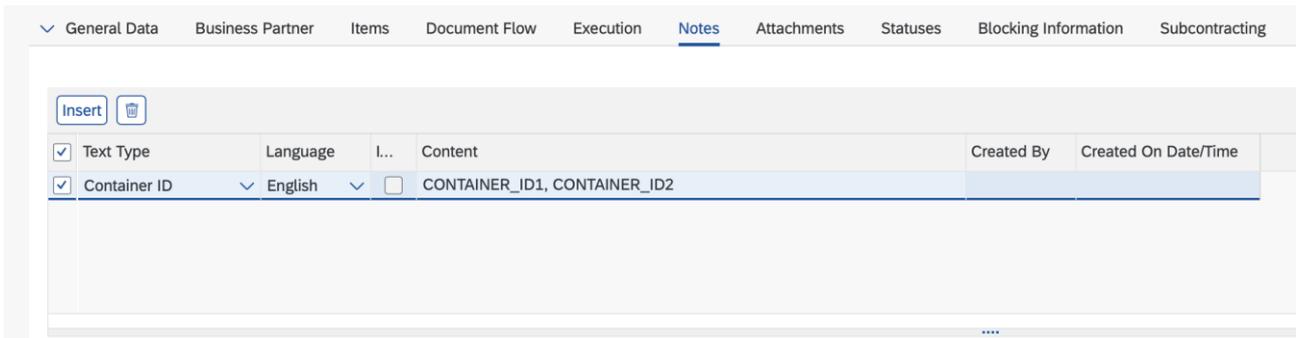
<input type="checkbox"/>	Business Transaction Document ID	Document Type for Business Transaction	Document Type for Business Transaction (Desc.)	Item
<input type="checkbox"/>	1570866519628	825	Dispute Case	
<input type="checkbox"/>	1570422048103	825	Dispute Case	
<input type="checkbox"/>	1574394404492	825	Dispute Case	
<input type="checkbox"/>	BOL_TEST	T50	Bill of Lading	
<input type="checkbox"/>	PRO_TEST	T67	Reference number of Carrier	

Ocean:

Simulation currently not available

You must obtain the real container ID (CONTAINER_ID) or Bill of lading (T50) from project44 and maintain it in TM freight order document reference or in global track and trace. This must be sent during track initialization. Based on the real ocean events, the events will be reported from project44. To monitor if the messages are being processed from SAP Business Network for Logistics as expected, you may view them in the *Manage Integration Logs* app (freight collaboration) or in the *Track Freight Movement* app (freight collaboration).

Example of how to maintain Shipment in TM to maintain these identifiers:



The screenshot shows the SAP TM 'Notes' tab interface. At the top, there is a navigation bar with tabs: General Data, Business Partner, Items, Document Flow, Execution, Notes (selected), Attachments, Statuses, Blocking Information, and Subcontracting. Below the navigation bar, there is a table with columns: Text Type, Language, I..., Content, Created By, and Created On Date/Time. The table contains one row with the following data:

Text Type	Language	I...	Content	Created By	Created On Date/Time
<input checked="" type="checkbox"/> Container ID	English	<input type="checkbox"/>	CONTAINER_ID1, CONTAINER_ID2		

Air:

You must obtain the real (not test) Master Airway waybill (T55) from project44 and maintain it in global track and trace. This must be sent during track initialization. Based on the real ocean events, the events will be reported from project44. To monitor if the messages are being processed from SAP Business Network for Logistics as expected, you may view them in the *Manage Integration Logs* app (freight collaboration) or in the *Track Freight Movement* app (freight collaboration).

9. Testing in SAP Business Network Global Track and Trace

To test the project44 integration in SAP Business Network Global Track and Trace, carry out the following steps:

1. Launch the *Manage Models* app. Select the GTT standard model "gttft1".
2. Switch to the *Runtime* view on the top right.
3. In the *Write Service* tab, find the *ShipmentEvent*. Click the green section of this API endpoint.
4. Click *Try it out* to test the API.
5. In the *Request Body* text box, clear the existing request payload. Copy and paste the sample payload we provided below and customize it to fit your needs.
6. Execute the request.
7. In the *Responses* section, it shows the response with the endpoint.

Sample Payload:

Prerequisite:

In the *Configure Partner Connections* app, choose a partner connection that is active and connected with project44.

- If the business partner (data contributor) that you choose is onboarded onto SAP Business Network for Logistics, note down its LBN ID with an “LBN#” prefix, such as “LBN#1234567”.
- If the business partner is not onboarded but connected with onboarded visibility providers, note down its *Business Partner ID Type* and *Business Partner ID Value*, with a hash “#” in between, such as “SCAC#MAEU”.

You can refer to the table below for reference:

Business Partner ID Type	Correct Form
LBN ID	LBN#
SCAC	SCAC#
P44_EU	P44_EU#

You can refer to the screenshot below for different scenarios:

- Connection 1 is for any partner who is not onboarded.
- Connection 2 is for a partner with a specific carrier identifier who is not onboarded.
- Connection 3 is for any partner who is onboarded.
- Connection 4 is for a partner with a specific carrier identifier who is onboarded.

To use road LTL / ocean / air / parcel tracking services through project44 unified API, see the [corresponding section](#) in the guide *Application Help*.

The screenshot shows the SAP 'Configure Partner Connections' interface. At the top, there are search filters for Business Partner, Network Partner, and Status. Below the filters is a table titled 'Partner Connections (5)'. The table has columns for Business Partner ID Type, Business Partner ID Value, Business Partner, Network Partner LBN ID, Network Partner, Service, Business Partner Credential, Network Partner Credential, Status, Created On, Created By, Changed On, and Changed By. Four rows are highlighted with red boxes and numbered 1 through 4:

	Business Partner ID Type	Business Partner ID Value	Business Partner	Network Partner LBN ID	Network Partner	Service	Business Partner Credential	Network Partner Credential	Status	Created On	Created By	Changed On	Changed By
1	Any Alternate ID	Any Alternate ID	Any	10000014	P44 Carrier-Partner	Shipment Air Tracking All	-	p44_oauth	Active	Oct 28, 2022, 11:58:56 AM	P002192	Oct 28, 2022, 11:58:56 AM	P002192
2	SCAC	MAEU	-	10000014	P44 Carrier-Partner	Shipment Ocean Tracking FCL	-	p44_oauth	Active	Oct 20, 2022, 2:54:22 PM	P002192	Oct 20, 2022, 2:54:22 PM	P002192
3	Any LBN ID	Any LBN ID	Any	10000014	P44 Carrier-Partner	Resource Tracking All	-	p44_oauth	Inactive	May 16, 2022, 6:03:44 PM	P002390	Jun 10, 2022, 4:37:38 PM	P002390
4	LBN ID	10000070	CARRIER2 P44 TEST	10000014	P44 Carrier-Partner	Shipment Tracking All	-	p44_oauth	Active	May 16, 2022, 6:04:06 PM	P002390	Jun 10, 2022, 4:37:26 PM	P002390

Sample Payload for Road LTL Tracking

```
{
  "actualBusinessTimestamp":
  "shippingType_code": "17",
  "serviceAgentLbnd":
  "transportationMode_code": "03",
  "plannedEvents":
  {
    "eventType":
    "eventMatchKey":
    "locationAltKey":
  },
  .....
},
"stops":
{
  "stopId":
  "locationId":
  "locationType_code":
  "ordinalNo":
},
.....
],
"shipperRefDocument": [
  {
    "idType_code":
    "value":
  },
  .....
],
"carrierRefDocument": [
  {
    "idType_code":
    "value":
  },
  .....
]
```

[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".

Note: "17" is the code for "LTL (Less Than Truck Load)".

[Action Required] Fill in the data contributor's identifier that you noted down in the prerequisite.

Note: "03" is the code for "Road Transport".

[Action Required] Fill in planned events. Provide at least one planned Departure event and one planned Arrival event, with their location alternative keys maintained in the location master data. The planned business timestamp of all events should be later than the current timestamp.

[Action Required] Fill in stops. Provide at least two stops: one for the point of departure and the other for the destination. Make sure all the locations mentioned in planned events are described here.

[Action Optional] Fill in the shipper reference document only when there is no carrier reference document provided. For example, use the code "001" for "Purchase Order".

[Action Optional] Fill in a valid purchase order number.

[Action Required] Fill in "T50", "T52", "PRO", "T67", or "L033". "T50" is the code for "Bill of Lading". "T52" is the code for "Master Bill of Lading". "PRO" and "T67" are the codes for "Progressive Rotating Order". "L033" is the code for "Pickup Reference".

[Action Required] Contact your carrier for a valid number.

Sample Payload for Road FTL Tracking

<pre>{ "actualBusinessTimestamp": "shippingType_code": "18", "serviceAgentLbInId": "transportationMode_code": "03", "plannedEvents": { "eventType": "eventMatchKey": "locationAltKey": }, ], "stops": { "stopId": "locationId": "locationType_code": "ordinalNo": }, ], "trackedObjects": [{ "idType_code": "value": }], "carrierRefDocuments": [{ "docType_code": "value": }] }</pre>	<p>[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".</p> <p>Note: "18" is the code for "FTL (Full Truck Load)".</p> <p>[Action Required] Fill in the data contributor's identifier that you noted down in the prerequisite.</p> <p>Note: "03" is the code for "Road Transport".</p> <p>[Action Required] Fill in planned events. Provide at least one planned Departure event and one planned Arrival event, with their location alternative keys maintained in the location master data. The planned business timestamp of all events should be later than the current timestamp.</p> <p>[Action Required] Fill in stops. Make sure all the locations mentioned in planned events are described here.</p> <p>[Action Required] Fill in "LICENSE_PLATE", "MOBILE_NUMBER" or "TRUCK_ID".</p> <p>[Action Required] Contact your carrier for a valid license number, mobile number, or truck ID.</p> <p>[Action Required] Fill in "T50" or "T52" for "Bill of Lading".</p> <p>[Action Required] Contact project44 for a valid Bill of Lading number.</p>
--	--

Sample Payload for Ocean LCL Tracking

```
{
  "actualBusinessTimestamp":
  "shippingType_code": "2",
  "serviceAgentLbInId":
  "transportationMode_code": "01",
  "plannedEvents":
  {
    "eventType":
    "eventMatchKey":
    "locationAltKey":
  },
  .....,
  ],
  "stops":
  {
    "stopId":
    "locationId":
    "locationType_code":
    "ordinalNo":
  },
  .....,
  ],
  "trackedObjects": [
    {
      "idType_code": "CONTAINER_ID",
      "value":
    }
  ],
  "carrierRefDocuments": [
    {
      "docType_code":
      "value":
    }
  ]
}
```

[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".

Note: "2" is the code for "LCL (Less Than Container Load)".

[Action Required] Fill in the data contributor's identifier that you noted down in the prerequisite.

Note: "01" is the code for "Maritime Transport".

[Action Required] Fill in planned events. Provide at least one planned Departure event and one planned Arrival event, with their location alternative keys maintained in the location master data. The planned business timestamp of all events must be later than the current timestamp.

[Action Required] Fill in stops. Make sure all the locations mentioned in planned events are described here.

[Action Required] Contact project44 for a valid container ID.

[Action Required] Fill in "T51", "T52", or "T67". "T51" is the code for "House Bill of Lading". "T52" is the code for "Master Bill of Lading". "T67" is the code for "Booking Reference Number".

[Action Required] Contact project44 for a valid House Bill of Lading number, Master Bill of Lading number, or Booking Reference Number.

Sample Payload for Ocean FCL Tracking

```
{
  "actualBusinessTimestamp":
  "shippingType_code": "3",
  "serviceAgentLbnd":
  "transportationMode_code": "01",
  "plannedEvents":
  {
    "eventType":
    "eventMatchKey":
    "locationAltKey":
  },
  .....,
},
"stops":
{
  "stopId":
  "locationId":
  "locationType_code":
  "ordinalNo":
},
.....
],
"trackedObjects": [
  {
    "idType_code": "CONTAINER_ID",
    "value":
  }
],
"carrierRefDocuments": [
  {
    "docType_code":

    "value":
  }
]
}
```

[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".

Note: "3" is the code for "LCL (Full Container Load)".

[Action Required] Fill in the data contributor's identifier that you noted down in the prerequisite.

Note: "01" is the code for "Maritime Transport".

[Action Required] Fill in planned events. Provide at least one planned Departure event and one planned Arrival event with their location alternative keys maintained in the location master data. The planned business timestamp of all events must be later than the current timestamp.

[Action Required] Fill in stops. Make sure all the locations mentioned in planned events are described here.

[Action Required] Contact project44 for a valid container ID.

[Action Required] Fill in "T51", "T52", or "T67". "T51" is the code for "House Bill of Lading". "T52" is the code for "Master Bill of Lading". "T67" is the code for "Booking Reference Number".

[Action Required] Contact project44 for a valid House Bill of Lading number, Master Bill of Lading number, or Booking Reference Number.

Sample Payload for Air Freight Booking

```
{
  "actualBusinessTimestamp":
  "shippingType_code":
  "serviceAgentLbnd":
  "transportationMode_code": "04",
  "plannedEvents":
  {
    "eventType":
    "eventMatchKey":
    "locationAltKey":
  },
  .....,
},
"stops":
{
  "stopId":
  "locationId":
  "locationType_code":
  "ordinalNo":
},
.....
],
"carrierRefDocuments": [
  {
    "docType_code":

    "value":

  }
]
}
```

[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".

[Action Required] Fill in "11" or "12". "11" is the code for "ULD (Unit Load Device)". "12" is the code for "Loose".

Note: The data contributor's identifier is not required for air tracking. You can fill in an empty string: "".

Note: "04" is the code for "Air Transport".

[Action Required] Fill in planned events. Provide at least one planned Departure event and one planned Arrival event, with their location alternative keys maintained in the location master data. The planned business timestamp of all events should be later than the current timestamp.

[Action Required] Fill in stops. Make sure all the locations mentioned in planned events are described here.

[Action Required] Fill in "T54" or "T55". "T54" is the code for "House Air Waybill". "T55" is the code for "Master Air Waybill".

[Action Required] Contact project44 for a valid House Air Waybill number or Master Air Waybill number.

Sample Payload for Parcel Tracking

<pre>{ "actualBusinessTimestamp": "serviceAgentLbnd": "transportationMode_code": "05", "plannedEvents": { "eventType": "eventMatchKey": "locationAltKey": }, ], "stops": { "stopId": "locationId": "locationType_code": "ordinalNo": }, ], "trackedObjects": [{ "idType_code": "PACKAGE_EXT_ID", "value": }] }</pre>	<p>[Action Required] Fill in the current timestamp in UTC time format, for example, "2022-07-01T00:00:00Z".</p> <p>[Action Required] Fill in the data contributor's identifier that you noted down in the prerequisite.</p> <p>Note: "05" is the code for "Parcel".</p> <p>Note: Fill in planned events (optional).</p> <p>[Action Required] Fill in stops. Provide at least two stops: one for the point of departure and the other for the destination. Make sure all the locations mentioned in planned events are described here.</p> <p>[Action Required] Use a real parcel tracking number.</p>
--	--

10. Monitoring Integration with project44

Within your Shipper or Solution Owner tenant, navigate to the *Manage Integration Logs* app, from where the calls from SAP Business Network for Logistics to project44 endpoints can be monitored. For sending orders from SAP Business Network for Logistics to project44, the receiver ID is mentioned below.

There are no exclusive filters on receiver ID; however, you can filter based on the message status.

- Test Receiver ID: 10010001289
- Prod Receiver ID: 10000478

Example

Manage Integration Logs Last Updated On : 14 Jun 2023, 12:16:24

Document ID: Received On: Clear

Documents (6) Failed Logs (0)

Document ID	Scenario	Overall Status	Timestamp	Involved Parties
222222243	Put Order For Tracking	Completed	14 Jun 2023, 11:13:50	10000478,10010001298
222222243	Put Order For Tracking	Completed	14 Jun 2023, 11:13:28	10000478,10010001298
222222245	Put Order For Tracking	Completed	14 Jun 2023, 11:09:59	10000478,10010001298

For events, the above IDs will be sender IDs.

You can view an individual log to analyze. Based on the error either fix at your end, report it to SAP, or report it to project44.

11. Support and Incident Resolution

To report an incident to SAP, [create a support ticket](#) categorized by component SBN-LBN-INT.

To report an incident to project44, email support@project44.com.