



PUBLIC

Implementation Guide for Tracking via Tracking Unit and Reference Document in the TM Scenario

SAP Business Network Global Track and Trace

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1. ABOUT THIS DOCUMENT

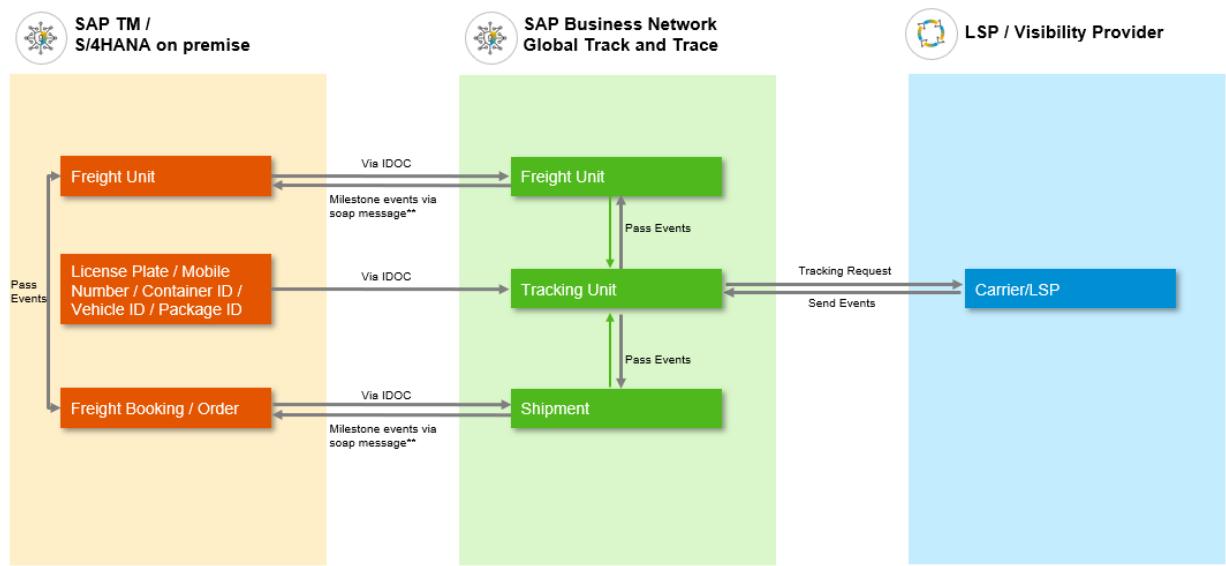
This implementation guide describes how to configure the extractors and maintain freight documents in SAP Transportation Management (SAP TM) for different tracking scenarios. The successful configuration does not indicate that the end-to-end tracking is enabled. To achieve that, you might also need support from visibility providers or logistics service providers.

2. TRACKING VIA TRACKING UNIT

In the TM scenario, you can track the shipments and freight units via tracking unit. The tracking unit is introduced as a standard tracked process in the GTT system, referring to the tracked objects that will be sent to visibility providers or logistics service providers for tracking the shipments and freight units, such as license plate, container ID, external package ID, etc. Both freight unit and freight order/freight booking observe the tracking unit. The process integration flow is as follows:

Tracking Unit

TM scenario - Process integration



Note: Events propagated from the tracking unit cannot be synchronized back to SAP TM.

To support this tracking scenario, you need to configure extractor settings and maintain tracking objects information on freight documents in SAP TM.

Prerequisites

Before you can maintain tracked objects information on freight documents in SAP TM, you must introduce new text types **CONT**, **MOBL** and **EPKG**. To do so, you must perform the following:

- a. Navigate to the **Text Type** section in **Customizing for Cross-Application Components**, under **Processes and Tools for Enterprise Applications > Reusable Objects and Functions for BOPF Environment > Dependent Object Text Collection > Maintain text Schema**.

b. Create entries with the **Text Type** and **Description** as follows:

Text Type	Description
CONT	Container ID
MOBL	Mobile Phone
EPKG	External Package ID

c. Navigate to the **Text Schema** section. Create a new text schema “TORITM” with the description “TOR Item Text Schema”. Select the text schema “TORITM” and double click on 'Assign Text Schema to BO and Node'. Create a new entry as follows:

Business Object Name	BO Node Name
/SCMTMS/TOR	ITEM_TR

d. Select the **DEFAULT** text schema for **CONT** and **MOBL** text types, and **TORITM** text schema for **EPKG** text type.

e. Navigate to the **Text Type to Text Schema Assignment** section.

f. Check if you have assigned the text type **CONT** and **MOBL** to the **DEFAULT** text schema, and **EPKG** to the **TORITM** text schema. If they are not yet assigned, assign them with the following attributes:
Deselect the following checkboxes:

- Mandatory
- Access Seq
- Reference
- Exit Class
- Internal
- Lang. Text

g. Save your entries.

2.1 FTL/LTL Tracking

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects on Freight Order/Freight Booking” for its associated freight unit, freight order and freight booking document types.



Display View "GTT Tracking Scenario Configuration Table":

More ▾

Doc. Type	Scenario
ZTR5	02 Maintain Tracked Objects on Freight Order/Freight Booking ▾
ZTUS	02 Maintain Tracked Objects on Freight Order/Freight Booking ▾

- Maintain Tracked Objects Information on Freight Order

You can do either of the following:

- In the **Registration Country/Region No.** field of the **General Data** tab, fill in the license plate.
- In the **Content** column of the **Notes** tab, fill in the mobile number.



Display SOF Standard Freight Order Type AccAWS 6100068007

Edit Refresh Copy Other Copy Options ▾ Check ▾ Follow Up ▾ Scheduling ▾ Subcontracting ▾ Create Service Order Schedule ▾ Set Status ▾

General Data	Business Partner	Items	Stages	Utilization	Subcontracting	Document Flow	Charges	Execution	Notes	Attachments	Statuses	...
Truck Means of Transport: <input type="text"/> Vehicle: <input type="text"/> Registration Country/Region No.: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Total/Consumed/Remaining Capac... : <input type="text"/> 300 <input type="text"/> KG Total/Consumed/Remaining Capac... : <input type="text"/> 3 <input type="text"/> M3 Maximum Utilization: <input type="range" value="0%"/> Cargo Information Cargo Weight: <input type="text"/> 300 <input type="text"/> KG	Trailer Means of Transport: <input type="text"/> Trailer: <input type="text"/> Registration Country/Region No.: <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Total/Consumed/Remaining Capac... : <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Total/Consumed/Remaining Capac... : <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> Maximum Utilization: <input type="range" value="0%"/> Capacity Total/Consumed/Remaining Capac... : <input type="text"/> <input type="text"/> <input type="text"/> <input type="text"/> KG											



Edit SOF Standard Freight Order Type AccAWS 6100068007

Edit Refresh Copy Other Copy Options ▾ Check ▾ Follow Up ▾ Scheduling ▾ Subcontracting ▾ Create Service Order Schedule ▾ Set Status ▾

General Data	Business Partner	Items	Stages	Utilization	Subcontracting	Document Flow	Charges	Execution	Notes	Attachments	Statuses	...	
<input type="button" value="Insert"/> <input type="button" value="Delete"/> <table border="1"> <thead> <tr> <th>Text Type</th> <th>Language</th> <th>I...</th> <th>Content</th> <th>Created ...</th> <th>Created On</th> </tr> </thead> <tbody> <tr> <td><input checked="" type="checkbox"/> Mobile Phone</td> <td>English</td> <td><input type="checkbox"/></td> <td>0013474462377</td> <td>HUEV</td> <td>07.06.2022 08:26:15 ...</td> </tr> </tbody> </table>	Text Type	Language	I...	Content	Created ...	Created On	<input checked="" type="checkbox"/> Mobile Phone	English	<input type="checkbox"/>	0013474462377	HUEV	07.06.2022 08:26:15 ...	<input type="button" value="Search"/> <input type="button" value="New"/> <input type="button" value="Print"/>
Text Type	Language	I...	Content	Created ...	Created On								
<input checked="" type="checkbox"/> Mobile Phone	English	<input type="checkbox"/>	0013474462377	HUEV	07.06.2022 08:26:15 ...								

2.2 Parcel Tracking

- Configure Extractor Settings
 - Enter the T-code "ZGTT_TRACK_CONF".
 - Set "Maintain Tracked Objects on Freight Unit" for its associated freight unit, freight order and freight booking document types.

SAP

Display View "GTT Tracking Scenario Configuration Table":

Doc. Type	Scenario
YTR1	03 Maintain Tracked Objects on Freight Unit
YTU1	03 Maintain Tracked Objects on Freight Unit

- Maintain Tracked Objects Information on Freight Unit
 - For SAP S/4HANA 1909 SP03 to SAP S/4HANA 2020 FPS01, in the **Notes** tab under the **Items** table, fill in the external package ID of each freight unit's package.

Display GTT Standard FU Type Demo 4100077248

Items	Item	Item Cat...	Package ID	Product	Gross Volu...	Gross Volu... UoM	Gross Weight	Gross Weight UoM	Qua...	Qua... Unit of Mea...	Packa...	Transp. Unit Resource	Equip. Group	Equipment Type	Item Description	
Package	50	Package	1000000010	ZTM_PACK01			30	KG	1	EA	Pallet					Pack materials01
Product	30	Product		ZTM_MAT01			10	KG	1	EA						Test material 01
Product	40	Product		ZTM_MAT02			20	KG	2	EA						Test material 02

Notes

Text Type	Language	I...	Content	Created By	Created On Date/Time
External Package ID	English		EXT_1000000010		

- For SAP S/4HANA 2020 FPS01 or onwards, in the **HU Identification 2** field, fill in the external package ID of each freight unit's package, and it will be updated to the **External Package ID** column of the **Items** table.

SAP Detailed Data for Handling Unit 1000021200

Identification	Material	Quantity	Unit
Handling units			
1000021201	ZTMPACK02		
20	DH_TM_MAT2	3	EA
1000021200	ZTMPACK01		
10	DH_TM_MAT1	1	EA

HU Identification: 1000021200 Identification Type: E
 Packaging Materials: ZTMPACK01 Pack materials01
 HU Identification 2: 1000021200_EXT Cust. S: Sort: 0

W/Vol./Dim. Status PackgMats Addit. Data Conts. History General Info Custom Fields

HU-specific data

System Status:	PHEX WHSE		
User status:			
HU storage number:		Storage status:	Blank
Current assignment:	0080272338		
HU storage loc.:	Handling unit without inventory management		
Contents:			

Packaging materials

Packag. matt type:	ACJ1 Pallet for WM	Pack. Mat. Cat.:	C Packaging materials
Matl grp pckg matt:			

Items										
Standard		Change Hierarchy:		All Items						
	Item	Item Type	Product	Package ID	External Package ID	Gross Vol...	Gross Vol...	Gross Wei...	Gross Wei...	Qu... UoM
<input type="checkbox"/>	Item Hierarchy									
<input type="checkbox"/>	Freight Unit 300009300	1000000								2 EA
<input type="checkbox"/>	Package 30 Pack materials01	1000021200								1 EA
<input type="checkbox"/>	Product 10 DH_TM_MAT1	30	ZTMPACK01	1000021200	1000021200_EXT	2 M3	200 KG			1 EA
<input type="checkbox"/>	Package 40 Pack materials02	1000021201								1 EA
<input type="checkbox"/>	Product 20 DH_TM_MAT2	10	DH_TM_MAT1			2 M3	200 KG			1 EA
<input type="checkbox"/>		40	ZTMPACK02	1000021201	1000021201_EXT	3 M3	300 KG			1 EA
<input type="checkbox"/>		20	DH_TM_MAT2			3 M3	300 KG			3 EA

Note:

If multiple packages are assigned to one freight unit, only when all packages are completed, the freight unit is set to “Completed” and then impacts the status of the relevant delivery items.

2.3 Ocean Tracking

There are three options:

Option One: If one freight booking only has one container ID or one freight booking has multiple container IDs and you do not know which freight unit is assigned to which container, do the following:

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects Information on Freight Order/Freight Booking” for its associated freight unit, freight order and freight booking document type.



Display View "GTT Tracking Scenario Configuration Table":

More ▾

GTT Tracking Scenario Configuration Table

Doc. Type	Scenario	
<input type="checkbox"/> ZT07	02 Maintain Tracked Objects on Freight Order/Freight Booking	▼
<input type="checkbox"/> ZTU7	02 Maintain Tracked Objects on Freight Order/Freight Booking	▼
<input type="checkbox"/>		

- Maintain Tracked Objects Information on Freight Booking
 - In the **Content** field of the **Notes** tab, fill in the container ID. If there are multiple container IDs, they need to be separated with the semicolon.



Display Standard Ocean Booking AccAWS-TU2 6500010361

Edit Refresh Copy Other Copy Options ▾ Schedule ▾ Follow Up ▾ Check ▾ Subcontracting ▾ Create Service Or

General Data	Business Partner	Items	Document Flow	Execution	Notes	Attachments	Statuses
<input type="button" value="Insert"/>	<input type="button" value="Delete"/>						
<input checked="" type="checkbox"/> Text Type	Language	I...	Content				
<input checked="" type="checkbox"/> Container ID	English	<input type="checkbox"/>	CBHU3202732;EISU9138027				

Option Two: If one freight booking has multiple container IDs and you know which freight unit is assigned to which container, do the following:

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects on Freight Unit” for its associated freight unit, freight order and freight booking document types.

GTT Tracking Scenario Configuration Table	
Doc. Type	Scenario
<input type="checkbox"/> YTR1	03 Maintain Tracked Objects on Freight Unit
<input type="checkbox"/> YTU1	03 Maintain Tracked Objects on Freight Unit
<input type="checkbox"/>	

- Maintain Tracked Objects Information on Freight Unit
 - In the **Content** field of the **Notes** tab, fill in the container ID.

SAP Edit SOF Standard Freight Unit Type AccAWS 4100059458

Edit Refresh Follow Up Check Direct Shipment Split/Merge Unassign Default Route Remove Unplanned Stages Fixing Cancel Document Display Settings ⚙️ ⓘ ⓘ

General Data Business Partner Stages Document Flow Notes Attachments Direct Shipment Options Statuses Administrative Data Execution Customs ...

Insert

Text Type	Language	I...	Content	Created ...	Created On
<input checked="" type="checkbox"/> Container ID	English	<input type="checkbox"/>	TEXU3605231	HUEV	07.06.2022 08:33:51 ...

Option three (Recommended): If you use the container unit to consolidate freight units in SAP TM, do the following:

- Configure Extractor Settings
 - Enter the T-code “ZGTT_TRACK_CONF”.
 - Set “Maintain Tracked Objects on Container Unit” for its associated freight unit, container unit, freight order and freight booking document types.



Display View

< More ▾

GTT Tracking Scenario Configuration Table	
Doc. Type	Scenario
<input type="checkbox"/> CFU1	04 Maintain Tracked Objects on Container Unit
<input type="checkbox"/> CTO1	04 Maintain Tracked Objects on Container Unit
<input type="checkbox"/> CTU1	04 Maintain Tracked Objects on Container Unit

- Maintain Tracked Objects Information on Container Unit
 - In the **Items** tab, select the container item. In the **Container Number** field of its **Details** tab below, fill in the container ID.

SAP Display GTT Standard Container Unit AccAWS 4500011808

Edit Refresh Copy Multiple Copies Check Follow Up Unassign Default Route Remove Unplanned Stages Set Status Load/Unload Plan Status (Stop) Execution Status Fixing

All Items

Item Hierarchy	Item Type	Item Type (Description)	Qu...	Qu... UoM	Gross Wei...	Gross Vol...	Product	Package ID	R...
<input checked="" type="checkbox"/> 123CUYUW Container 1000000			1	EA	300	KG	3	M3	
<input type="checkbox"/> GTT Standard Freight Unit AccAWS CU 4100059669			2	EA	300	KG	3	M3	
<input type="checkbox"/> Product 10 DH_TM_MAT1			1	EA	200	KG	2	M3	DH_TM_MAT1
<input type="checkbox"/> Product 20 DH_TM_MAT2			1	EA	100	KG	1	M3	DH_TM_MAT2

123CUYUW Container 1000000

Details FWO Data Quantities Notes Business Partner Content Identification Document References Customs Seals Service Orders Discrepancies

General Data Capacity

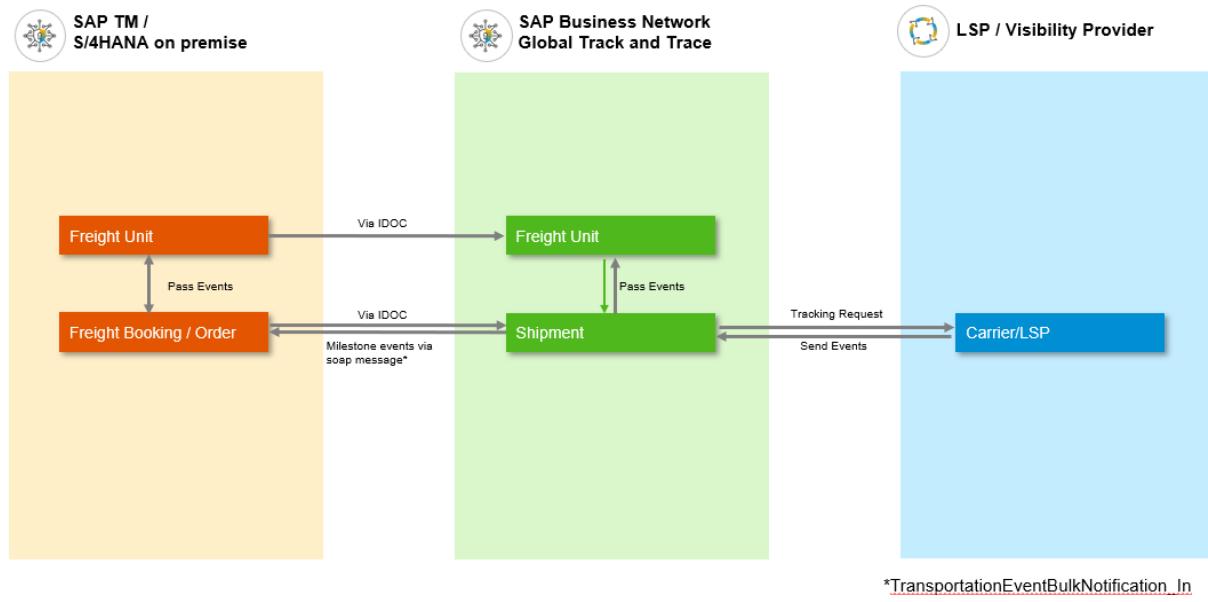
Item Type:		Maximum Payload Weight:	
Description:		Cubic Capacity:	
Container:		Length:	
Container Number:	123CUYUW	Width:	

3. TRACKING VIA REFERENCE DOCUMENT (LEGACY VERSION)

You can still track the shipments and freight units via carrier reference document, such as Bill of Lading, Master Bill of Lading, Master Airway Bill, Reference number of Carrier. In this way, the shipment will be sent to visibility providers. The process integration flow is as follows:

TM Scenario

Process integration



To support this tracking scenario, you need to configure extractor settings and maintain reference document information on freight documents in SAP TM as follows:

3.1 Configure Extractor Settings

By default, the freight unit and the freight order are tracked via reference document. In this case, you do not need to configure the extractor settings. But you can still set “Maintain Reference Document on Freight Order/Booking” for its associated freight unit, freight order and freight booking document types.

GTT Tracking Scenario Configuration Table	
Doc. Type	Scenario
STR1	01 Maintain Reference Document on Freight Order/Freight Booking
STU1	01 Maintain Reference Document on Freight Order/Freight Booking

3.2 Maintain Document No. on Freight Documents

To maintain the Document No. on different freight documents in SAP TM, do the following:

- For FTL: on Freight Order, in the **Document References** tab, fill in the Bill of Lading (T50) on Freight Order.

SAP Edit SOF Standard Freight Order Type AccAWS 6100068007

Document References								
Business Transaction Document ID	Document Type for Business Transaction	Document Type for Business Transaction (Desc.)	Item	Business Transac...	BTD Item Type Code (Desc.)	Business Transaction Document D...	Issuing Party of Bus. Trans. Document	
80272564	73	Outbound Delivery					QW9CLNT170	
65365	114	Sales Order					QW9CLNT170	
SE202206080001	T50	Bill of Lading						

- For LTL: on Freight Order, in the **Document References** tab, fill in the Bill of Lading(T50) and Reference Number of Carrier (T67).

SAP Edit SOF Standard Freight Order Type AccAWS 6100068007

Document References								
Business Transaction Document ID	Document Type for Business Transaction	Document Type for Business Transaction (Desc.)	Item	Business Transac...	BTD Item Type Code (Desc.)	Business Transaction Document D...	Issuing Party of Bus. Trans. Document	
80272564	73	Outbound Delivery					QW9CLNT170	
65365	114	Sales Order					QW9CLNT170	
SE202206080001	T50	Bill of Lading						

SAP Edit SOF Standard Freight Order Type AccAWS 6100068007

Document References								
Business Transaction Document ID	Document Type for Business Transaction	Document Type for Business Transaction (Desc.)	Item	Business Transac...	BTD Item Type Code (Desc.)	Business Transaction Document D...	Issuing Party of Bus. Trans. Document	
80272564	73	Outbound Delivery					QW9CLNT170	
65365	114	Sales Order					QW9CLNT170	
PRO202206089001	T67	Reference number of Carrier						

- For Air Tracking: on Freight Booking, in the **MAWB No.** field of the **Booking** tab, fill in the Master Airway Bill number.

SAP Edit SOF Standard Air Booking AccAWS 6500010354

Booking										
Capacity and Cargo	Business Partner	Charges	Operations	Locations	Customs	Service Orders	Restriction to Organizational Units	Overview	...	
Freight Booking Data					Organizational Data					
Booking Type:	ZTA1	SOF Standard Air Booking AccAWS			Origin Organization:					
Issuing Carrier Airline Code/Local C...	AC	TM9-CA-AC	Air Canada /			Destination Organization:				
MAWB No.:	066	72390821				Issuing Carrier's Agent:				
First Carrier Airline Code/Flight No./...					IATA Agent Code/Agent's CASS Acc... :					

- For Ocean Tracking: on Freight Booking, in the **Carrier's Master Bill of Lading Number** field of the **General Data** tab, fill in the Master Bill of Lading number.

SAP Edit SOF Standard Ocean Booking AccAWS 6500010350

Edit Refresh Copy Other Copy Options ▾ Schedule ▾ Follow Up ▾ Check ▾ Subcontracting ▾ Create Service Order Fixing ▾ Set Status ▾ Load/Unload Plan Status (Stop) ▾ ...

General Data	Business Partner	Items	Document Flow	Execution	Notes	Attachments	Statuses	Blocking Information	Subcontracting	Carrier Ranking	Charges	...
<div style="display: flex; justify-content: space-between;"> <div style="flex: 1;"> Freight Booking Data <p>Booking Type: ZTO1 SOF Standard Ocean Booking AccAWS</p> <p>Carrier: <input type="text"/> <input type="button"/></p> <p>Executing Carrier: <input type="text"/> <input type="button"/></p> <p>Communication Party: <input type="text"/> <input type="button"/></p> <p>Steamship Line Booking Number: <input type="text"/></p> <p>Carrier's Master Bill of Lading Number: <input type="text" value="20220609001"/> <input type="checkbox"/></p> <p>Booking Confirmation Status: <input type="text" value="1"/> Not Sent to Carrier</p> </div> <div style="flex: 1;"> Capacity Requirements <p>Container Count: <input type="text"/> <input type="button"/></p> <p>Confirmed Container Count: <input type="text"/> <input type="button"/></p> <p>Cargo Capacity: <input type="text"/> TEU</p> <p>Confirmed Cargo Capacity: <input type="text"/> TEU</p> </div> <div style="flex: 1;"> Organizational Data <p>Purchasing Organization: <input type="text"/> <input type="button"/></p> </div> </div>												

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