SAP ERP Sample Code Configuration Guide for Fulfillment Tracking Apps

SAP Logistics Business Network, Global Track and Trace Option

September 2021

Contents

Document History

2109 Release:

Appendix: Define the Unplanned Events for Freight Booking

2108 Release:

1. Update BC set file in the GitHub

2. Chapter 4.6 Define GTT Extraction Functions
   - Add "Tracking ID Extractors": GTT_MIA_IDLV_HD_TID (Tracking ID Extractor for Inbound Delivery Header)
   - Add "AOID Extractor": GTT_MIA_IDLV_HD_AOID (AOID Extractor for Inbound Delivery Header)
   - Add "AOID Extractor": GTT_MIA_IDLV_IT_AOID (AOID Extractor for Inbound Delivery Item)
   - Add "AOID Extractor": GTT_MIA_SHP_HD_AOID (AOID Extractor for Shipment Header)
   - Add "AOID Extractor": GTT_STS_AOID_TOR (AOID Extractor for FU/FO/FB)

3. Chapter 4.12.1 Define Application Object Types for Inbound Delivery Header
   - Adjust "AOID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for fields "Cntl Tab. Type" and "AO ID Field"
   - Add "AOID Function" and set its value to "GTT_MIA_IDLV_HD_AOID"
   - Adjust "TrkID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for fields "Tr. ID Tab. Type", "Tracking ID Fld", "Tr. ID Code Set"
   - Add "Tr.ID Extractor" and set its value to "GTT_MIA_IDLV_HD_TID"

4. Chapter 4.12.2 Define Application Object Types for Inbound Delivery Item
   - Adjust "AOID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for fields "Cntl Tab. Type" and "AO ID Field"
   - Add "AOID Function" and set its value to "GTT_MIA_IDLV_IT_AOID"

5. Chapter 4.13.1 Define Application Object Types for Shipment Header
   - Adjust "AOID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for fields "Cntl Tab. Type" and "AO ID Field"
   - Add "AOID Function" and set its value to "GTT_MIA_SHP_HD_AOID"

6. Chapter 4.14.1 Define Application Object Types for Freight Unit Header
   - Adjust "AOID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for field " Cntl Tab. Type " and "AO ID Field"
   - Add " AOID Function" and set its value to "GTT_STS_AOID_TOR"

7. Chapter 4.15.1 Define Application Object Types for Road Freight Order/Ocean/Air Booking Header
   - Adjust "AOID Method" from "Determine from Field" to "Determine by Function"
   - Remove the value for field " Cntl Tab. Type " and "AO ID Field"
   - Add " AOID Function" and set its value to "GTT_STS_AOID_TOR"

2105 Release:
Initial version.

1. Prerequisites

1.1 Check the SAP Version

The SAP Product Version for the global track and trace option of SAP Logistics Business Network, Version 2 shall be SAP EHP1 FOR SAP NETWEAVER 7.3 or higher.

The ABAP codes to support Fulfillment Tracking apps for GTT Version 2 shall be implemented in S4 HANA 1909 SP03 on premise that is not validated in lower release, and not applicable for ECC series of products.

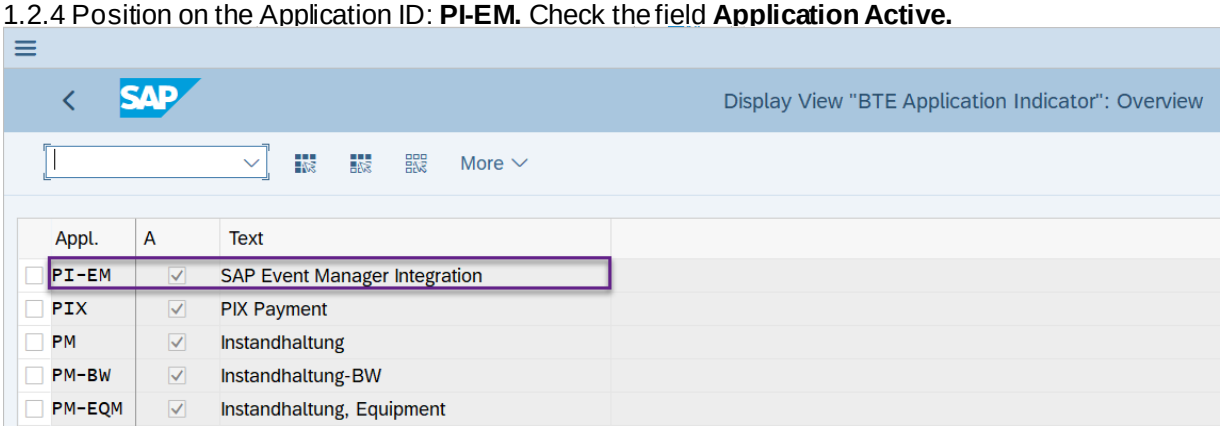
The following SAP NOTEs shall be implemented.
2937175 - Enhancement of IDOCs sent to GTT
2974952 - Error in Note **2937175**
2959576 - Amendments to EM API for LBNTT2.0

Tips:
SAP version reference:
https://support.sap.com/en/my-support/software-downloads/support-package-stacks/product-versions.html#section

Note-assistant reference:
https://support.sap.com/en/my-support/knowledge-base/note-assistant.html

1.2 Log on the Development Client to Configure BTE

1.2.1 Ensure you have development access to the client for cross-client customizing and local development.
1.2.2 Log on to the client and enter transaction code (T-code): **FIBF.**
1.2.3 Click **More->Settings -> Identification -> SAP Applications.**
1.2.4 Position on the Application ID: **PI-EM.** Check the field **Application Active.**



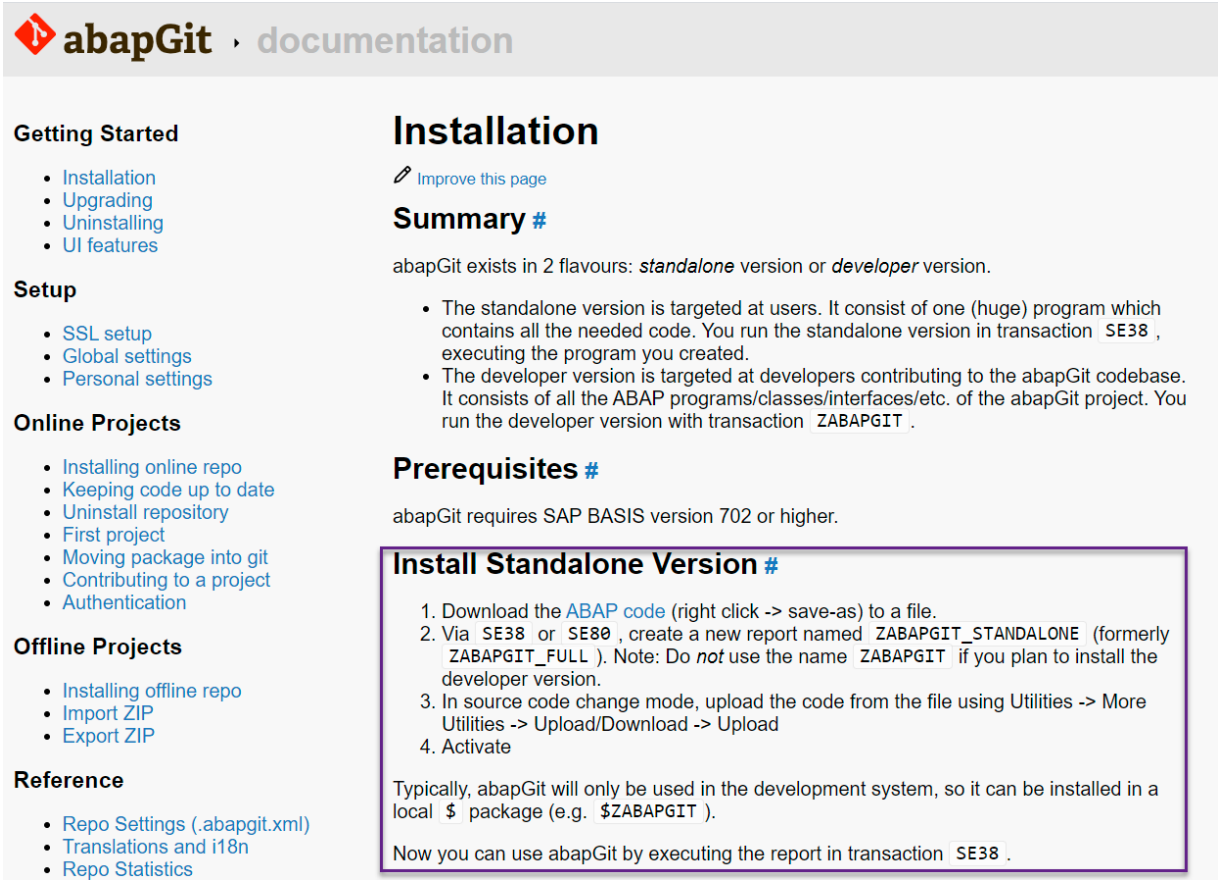
1.2.5 Click **Save.**

2. Download ABAP Code from GitHub

2.1 Initial Download ABAP Code from GitHub

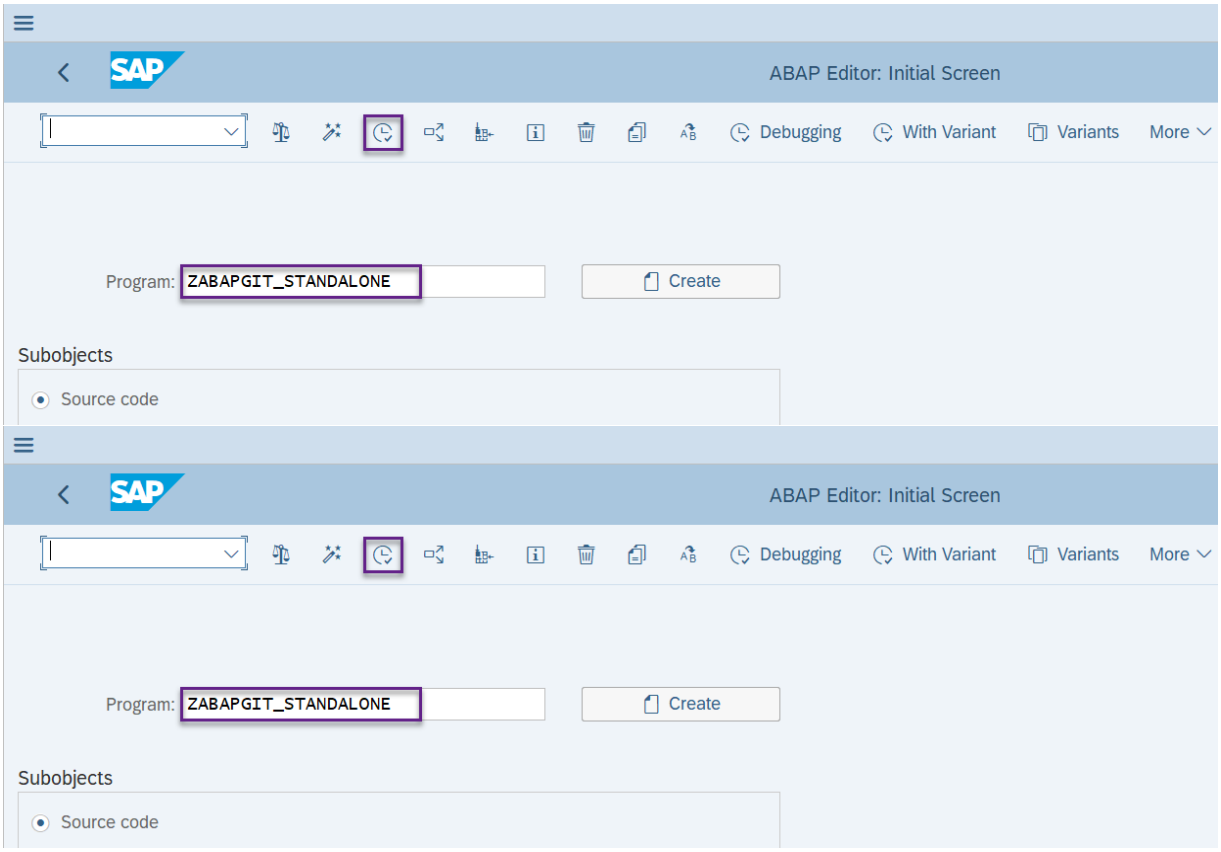
2.1.1 Install ABAPGit

You need to install ABAPGit before downloading the codes from GitHub. To install ABAPGit, follow the instructions on https://docs.abapgit.org/guide-install.html. Make sure you **Install the standalone version** in your dev system. When installation is complete, a new report is created, *ZABAPGIT_STANDALONE*.

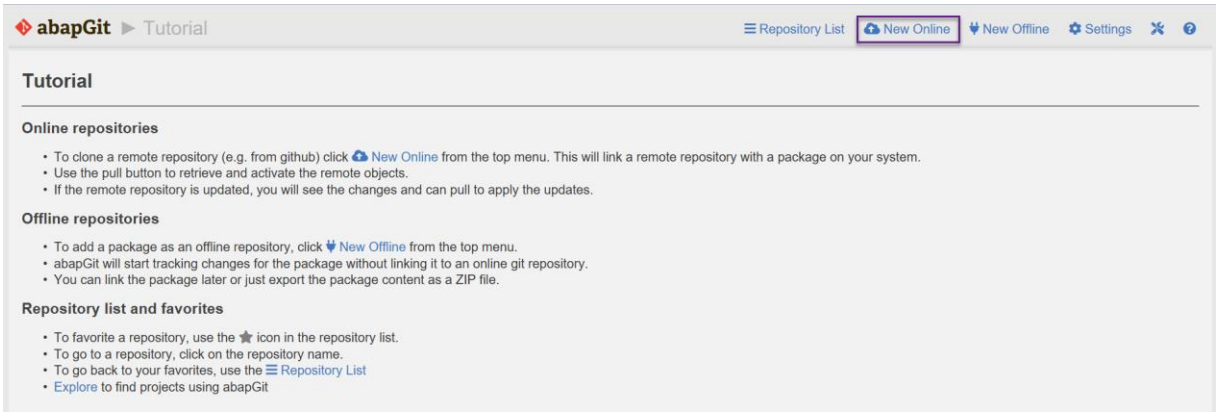


2.1.2 Download ABAP Code from GitHub

2.1.2.1 Enter T-code *SE38* and fill in the report name from 2.1.1, *ZABAPGIT_STANDALONE. Click* ***Execute*** *to run the report.*



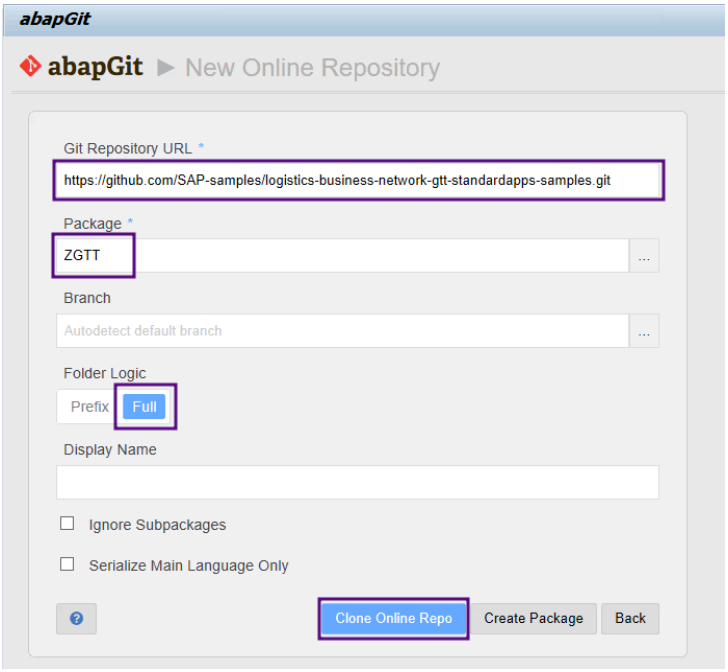
2.1.2.2 Click **New Online** to download the code.



2.1.2.3 Fill in the **Git Repository URL**.

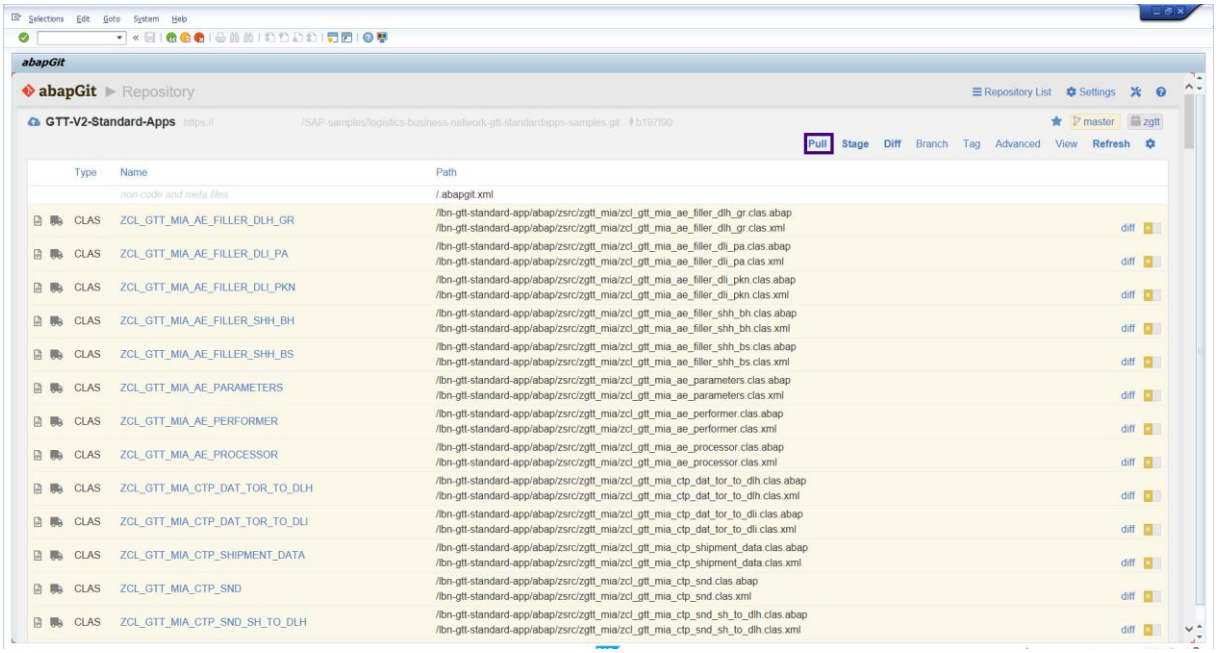
https://github.com/SAP-samples/logistics-business-network-gtt-standardapps-samples.git

2.1.2.4 Fill in the **Package** where you want to create the new ABAP code. If the package does not exist yet, click **Create package** to create it. Set *Full* for **Folder Logic.** Click **Clone Online Repo** to download the code.



2.1.2.5 Assign the change to a change request. If you do not have any available change requests, you need to create a new one.

2.1.2.6 Click **Pull** to pull down the code of the latest version.



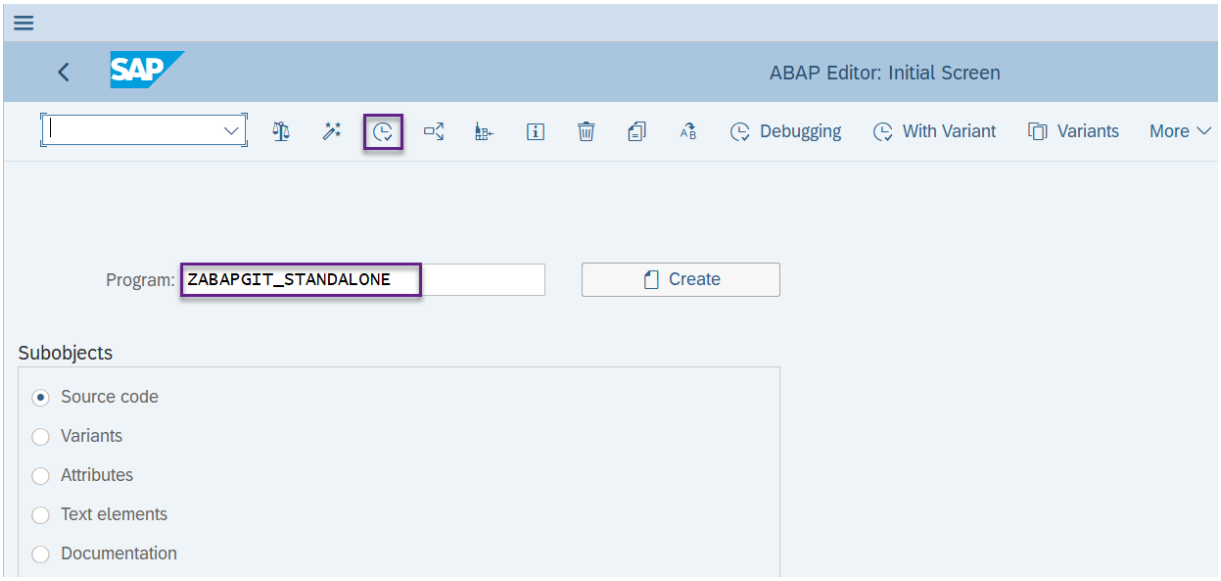
2.1.2.7 After you download the code, you can check it with T-code *SE80*.

2.2 Update ABAP Code from GitHub

In each release, there are some changes in the public sample codes. To update your local sample codes of Fulfillment Tracking apps after a future release, do the following:

2.2.1 Update ABAP Code from GitHub

2.2.1.1 Enter T-code *SE38* and fill in the report name *ZABAPGIT_STANDALONE*. Click the **Execute** icon to run the report.



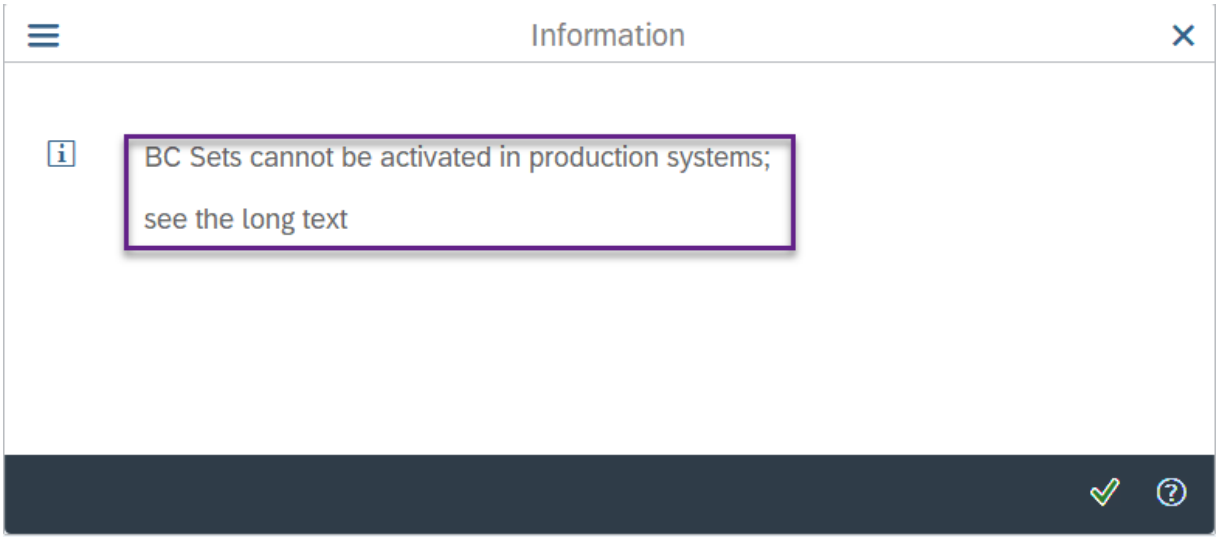
2.2.1.2 To access the Fulfillment Tracking apps' repository, click the › button.

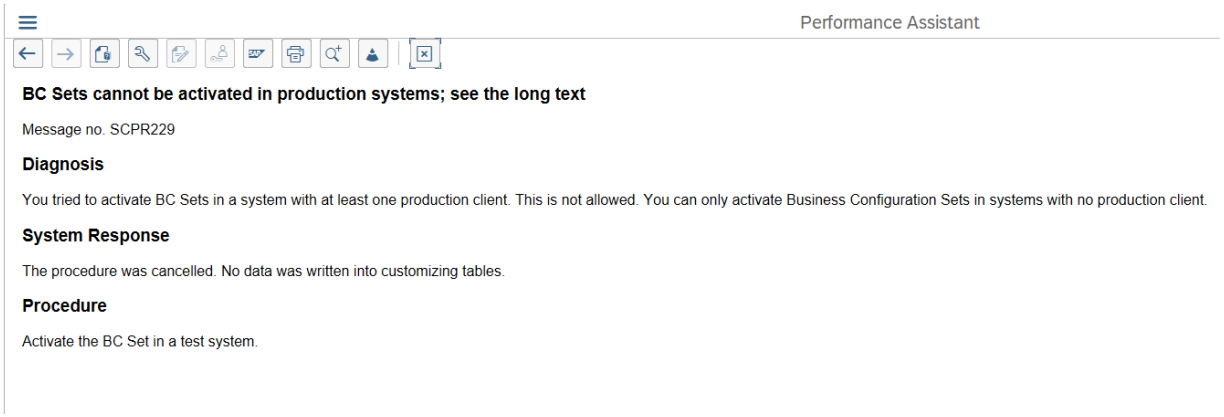
2.2.1.3 Click **Pull** to pull down the latest version code.

3. Configuration Option 1 (Import BC Set + Manual Configuration)

Prerequisite:

For this option, you must build up the system environment WITHOUT a production client for preparation. If you try to import the BC set into the system with a production client, an error will pop up.

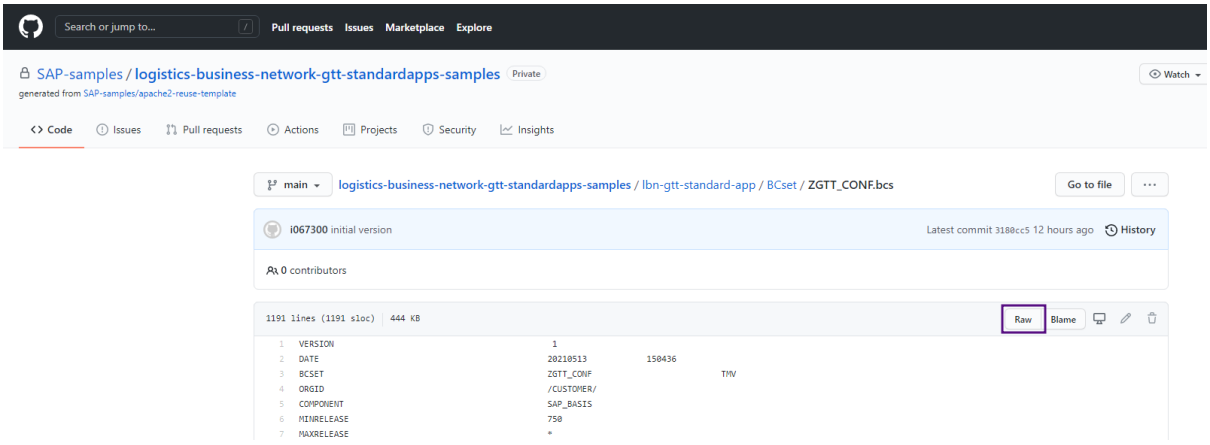




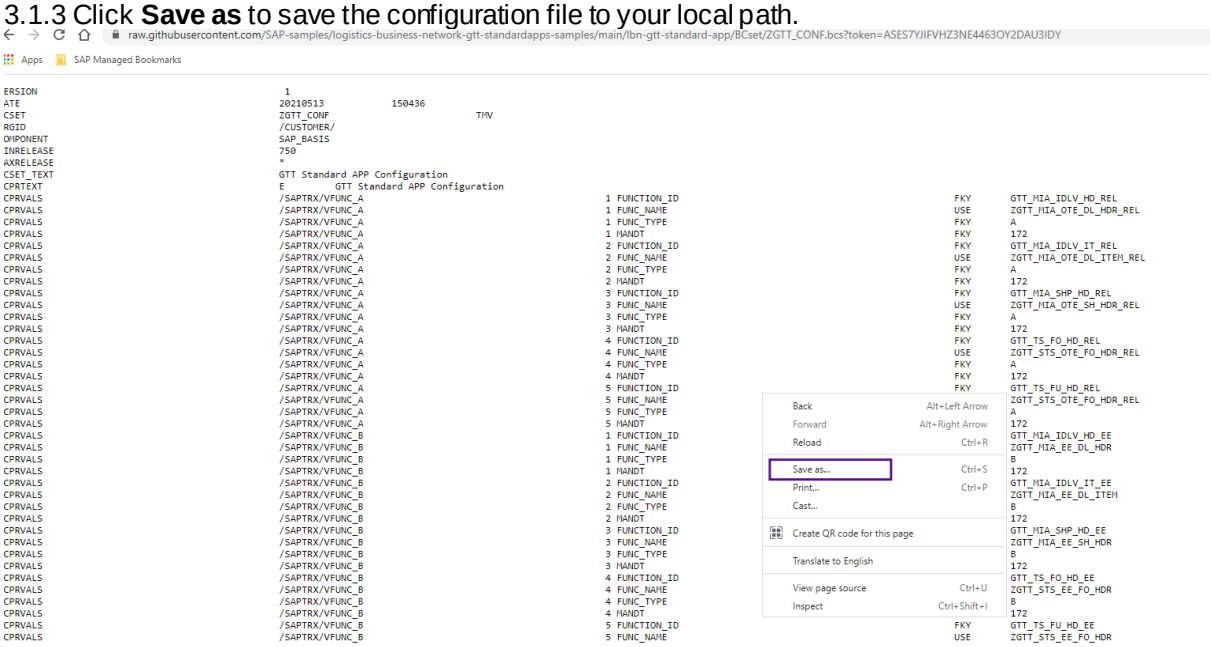
3.1 Download BC Set from GitHub

3.1.1 Navigate to BC Set in https://github.com/SAP-samples/logistics-business-network-gtt-standardapps-samples/blob/main/lbn-gtt-standard-app/BCset/ZGTT_CONF.bcs.

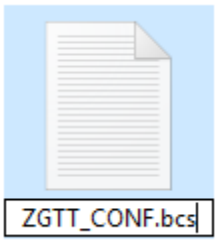
3.1.2 Click on “Raw” button.



3.1.3 Click **Save as** to save the configuration file to your local path.



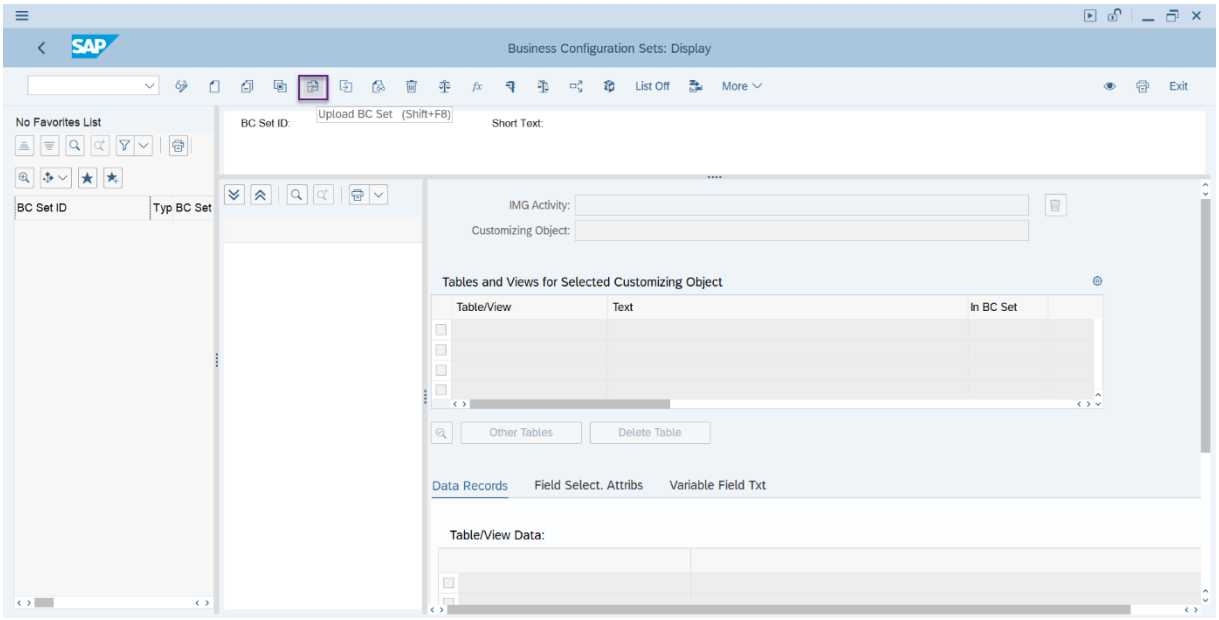
3.1.4 Change file extension to “.bcs”.



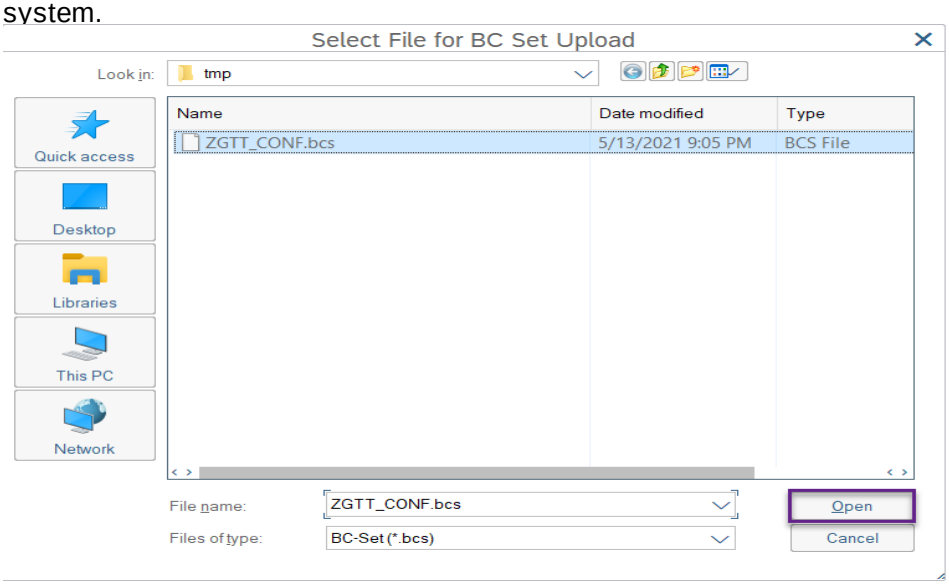
3.2 Import BC Set

3.2.1 From SAP Easy Access Menu, **Tools** -> **Customizing** -> **Business Configuration Sets** -> **Display and Maintain BC Sets** (Transaction Code SCPR3).

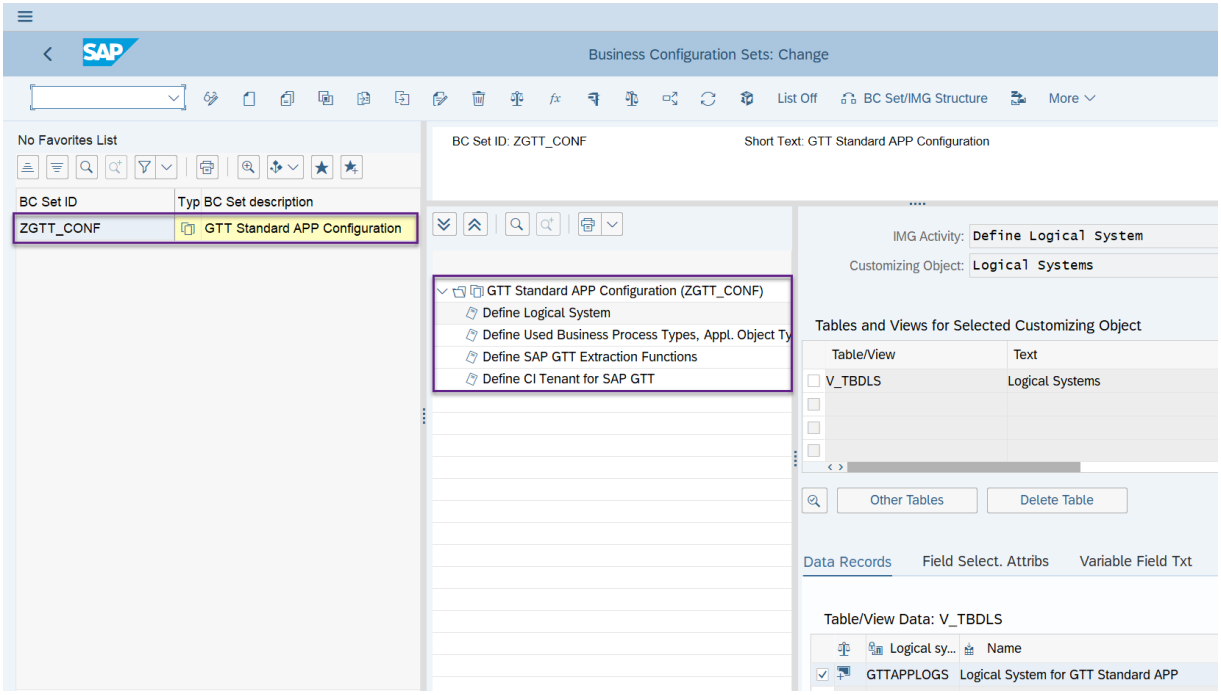
3.2.2 Select **Upload BC Set**.



3.2.3 Select the file " ZGTT_CONF.bcs", then click **Open** to upload the BC set to your development system.



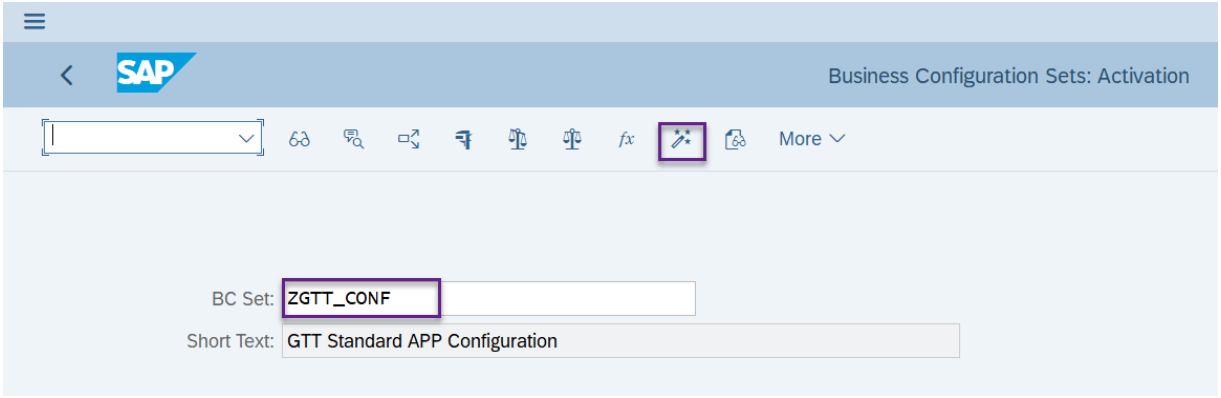
All of the configurations are loaded in the system.



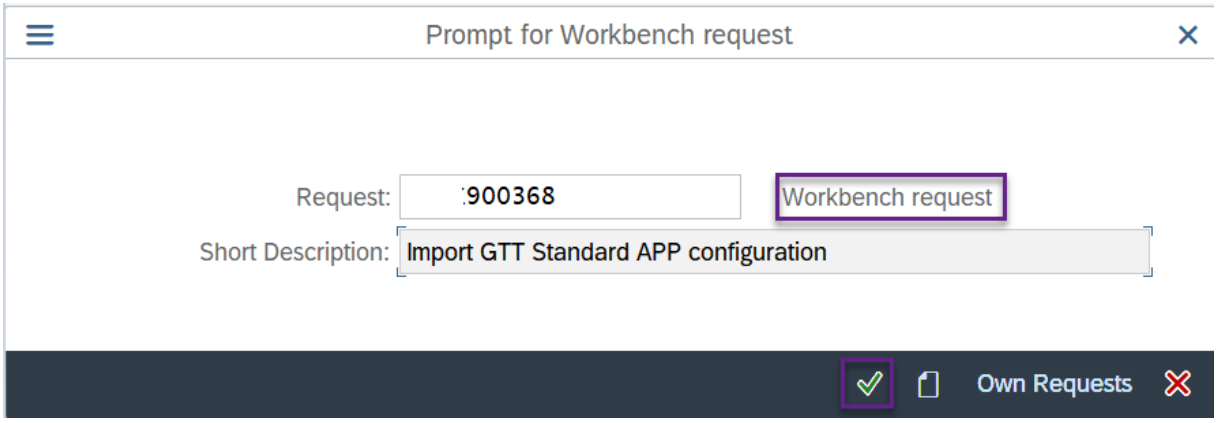
3.2.4 Click **Save** to save the BC Set.

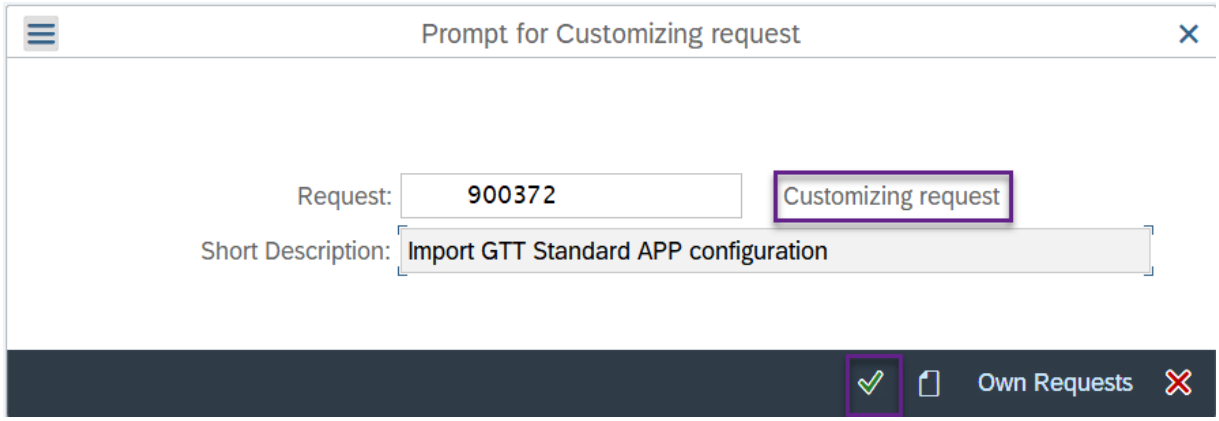
3.3 Activate BC Set

3.3.1 From SAP Easy Access Menu, **Tools** -> **Customizing** -> **Business Configuration Sets** -> **Activation of BC Sets** (Transaction Code SCPR20).
3.3.2 Enter the name of the BC Set and select **Activate**.



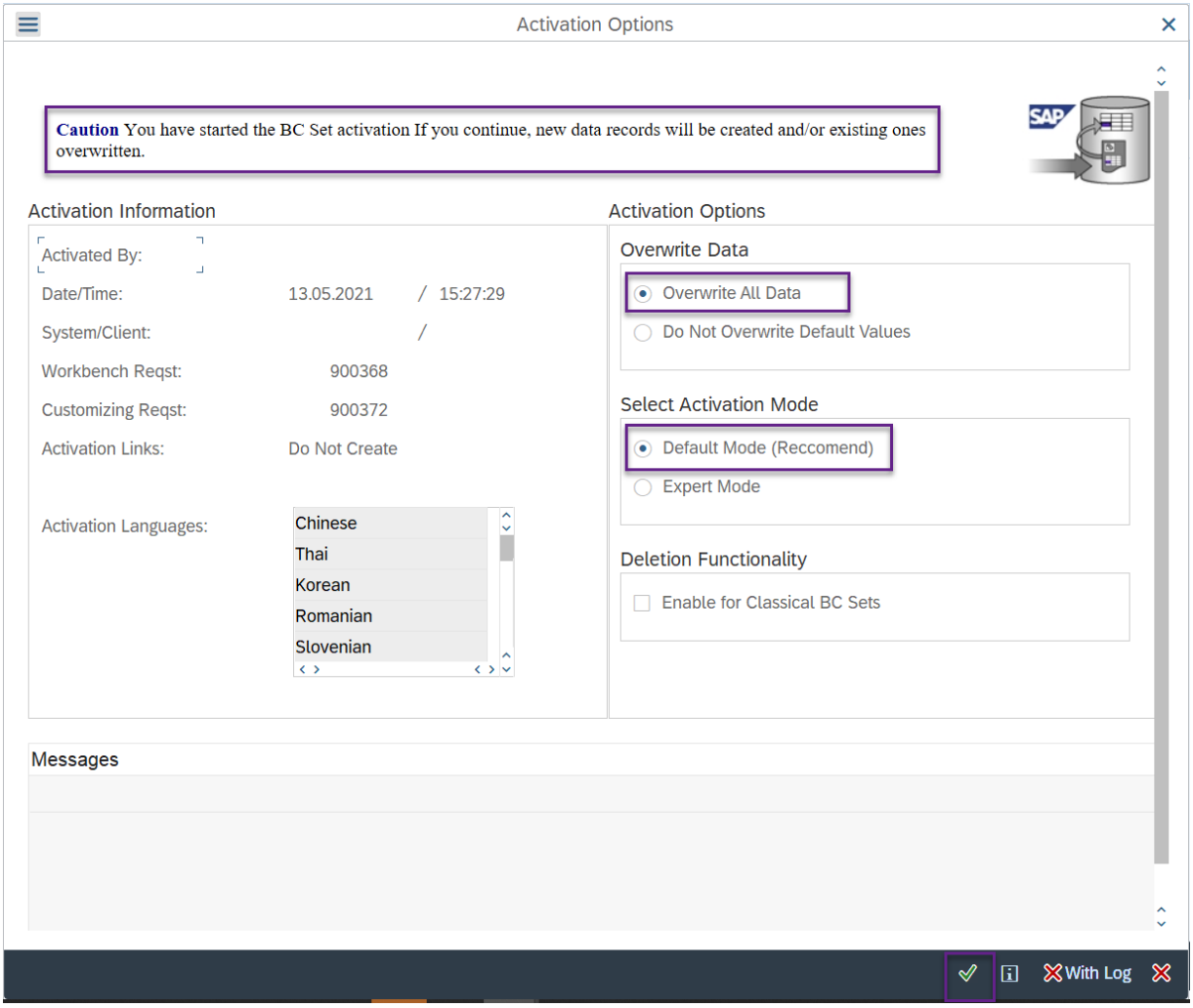
3.3.3 Provide a Workbench request and a Customizing request.

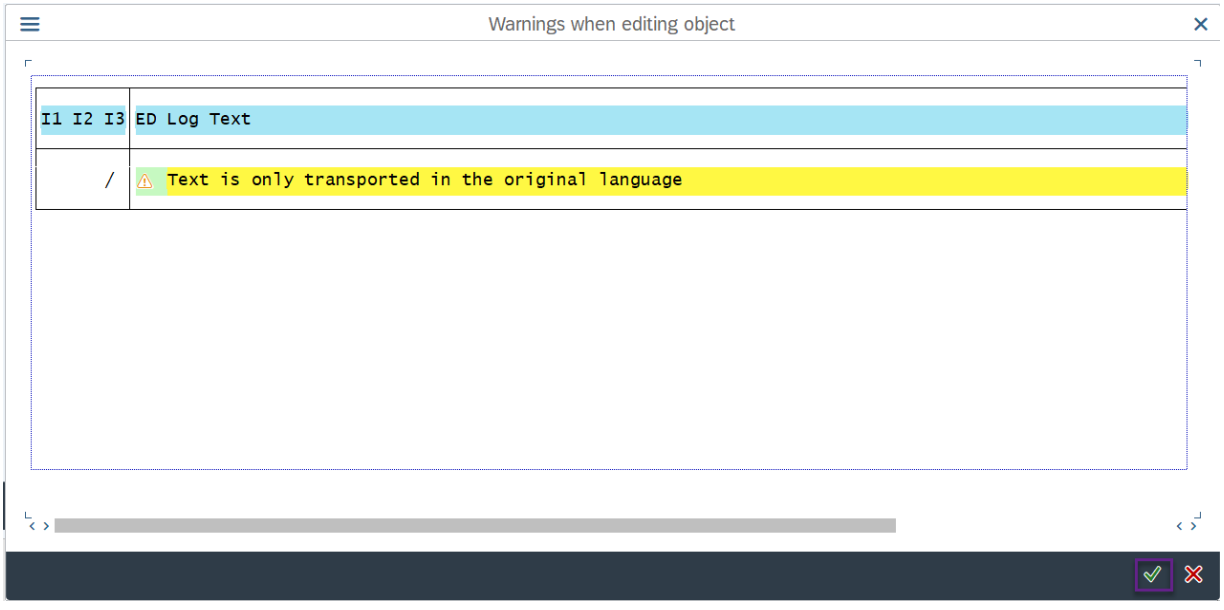




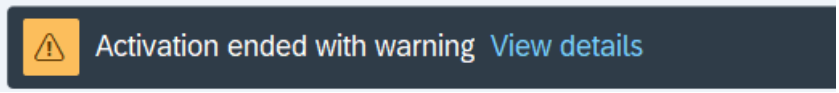
3.3.4 Various activation options are available. Choose appropriate ones and click **Continue** to proceed with the activation.

The following message is displayed:
"**Caution** You have started the BC Set activation If you continue, new data records will be created and/or existing ones overwritten."

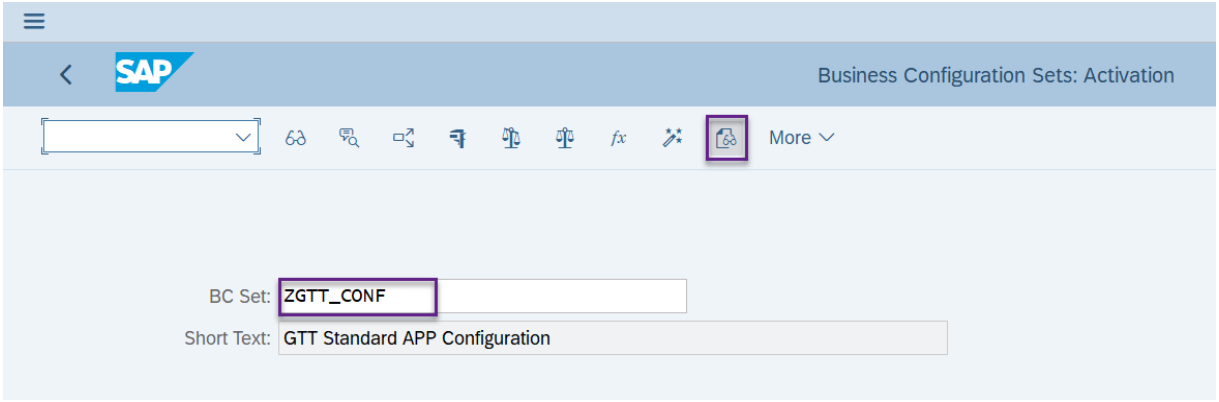


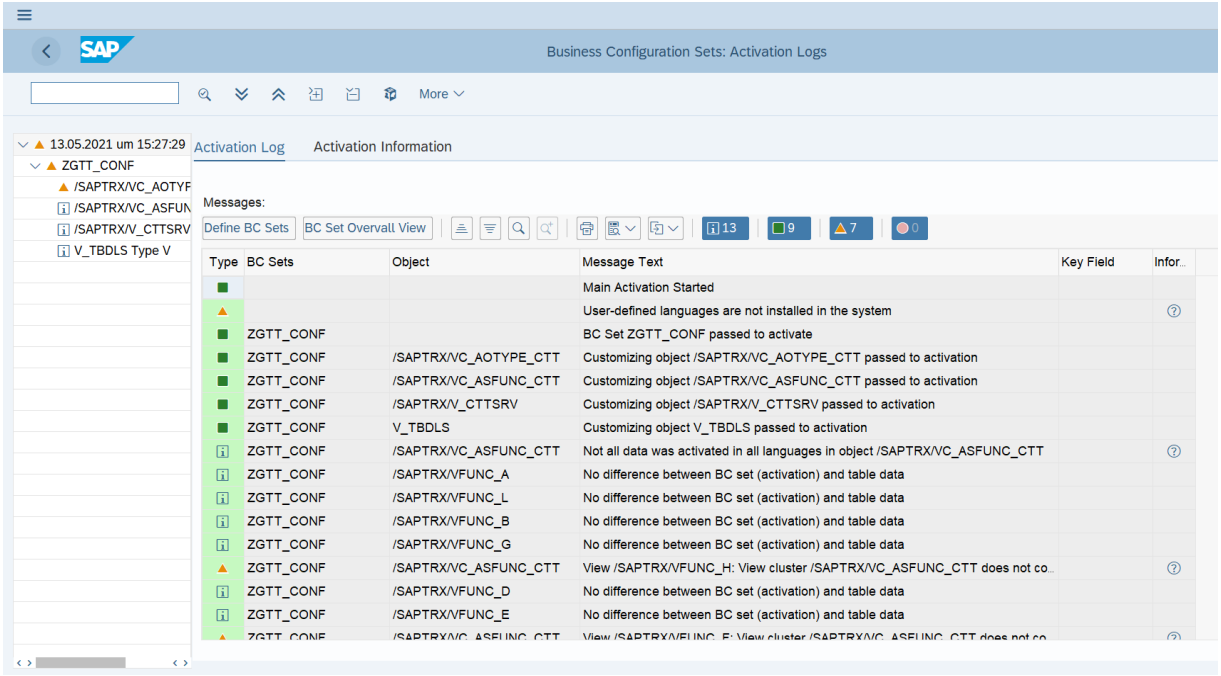


3.3.5 BC Set is activated and BC set data is stored in the customization tables.



3.3.6 Click **Activation Logs** to check the logs.



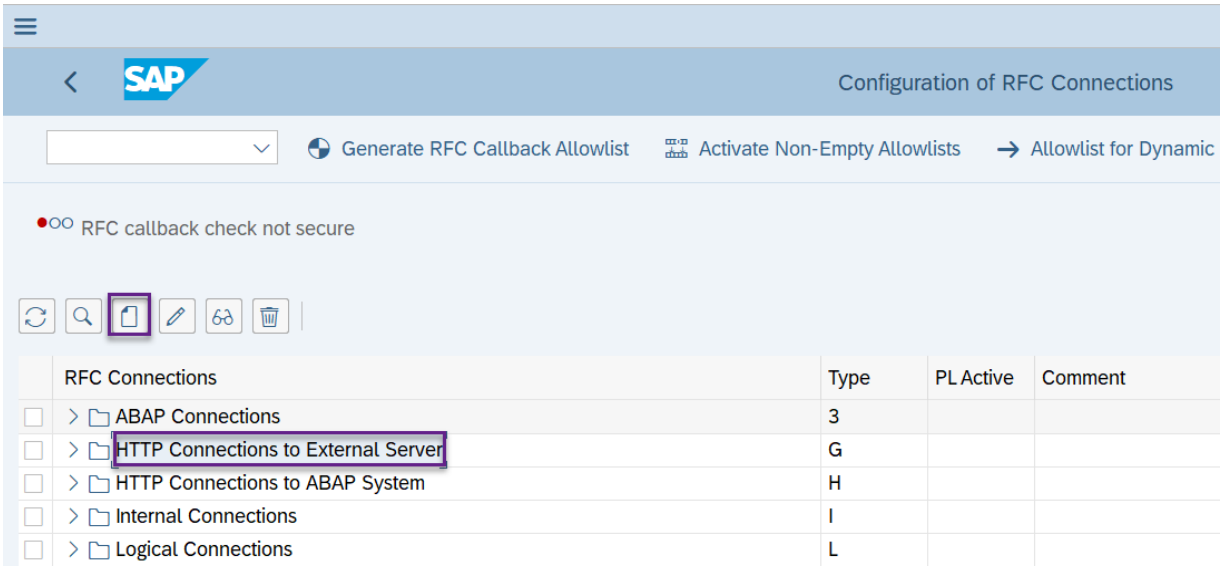


3.4 Define RFC Connection for GTT

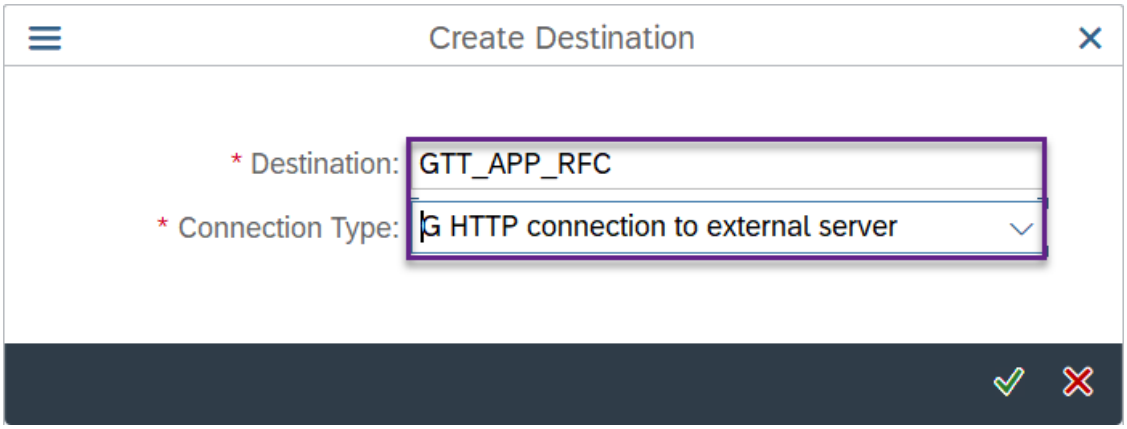
3.4.1 Log on to the business client, enter T-code *SPRO* and then click **SAP Reference IMG** to open **Display IMG page.**

3.4.2 Click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define System Configuration**. Choose activity: **Define RFC Connection for SAP GTT**

3.4.3 Choose **HTTP Connections to External Server**, click **Create** to create a new RFC connection.



3.4.4 Fill in the **Destination** and choose the **Connection Type: "G-HTTP connection to external server"**.



3.4.5 Enter a description. In the **Technical Settings** tab, fill in the **Host**, **Port** and **Path Prefix.**

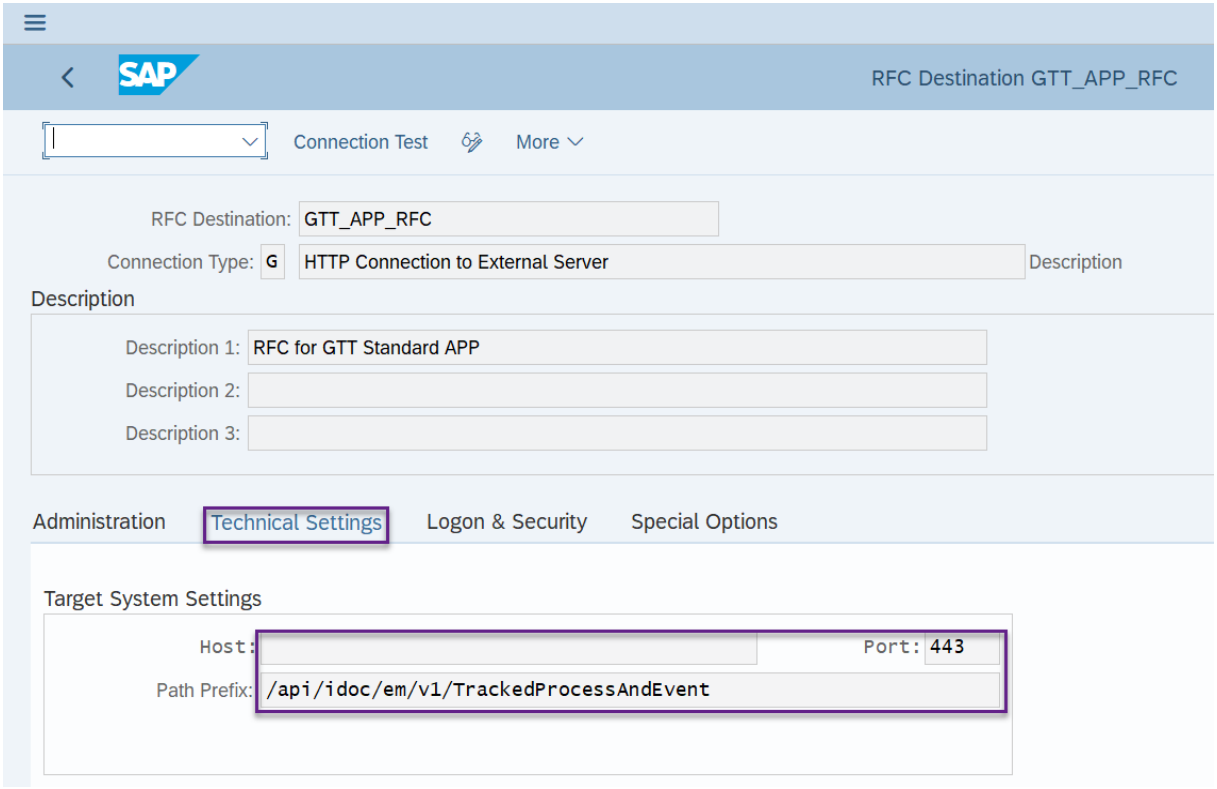
For example, the URL of solution owners is as follows:

https://sat-so-01.gtt-flp-lbnplatform-pre-live.cfapps.eu10.hana.ondemand.com/

Host: *sat-so-01.gtt-flp-lbnplatform-pre-live.cfapps.eu10.hana.ondemand.com*

Port: *443*

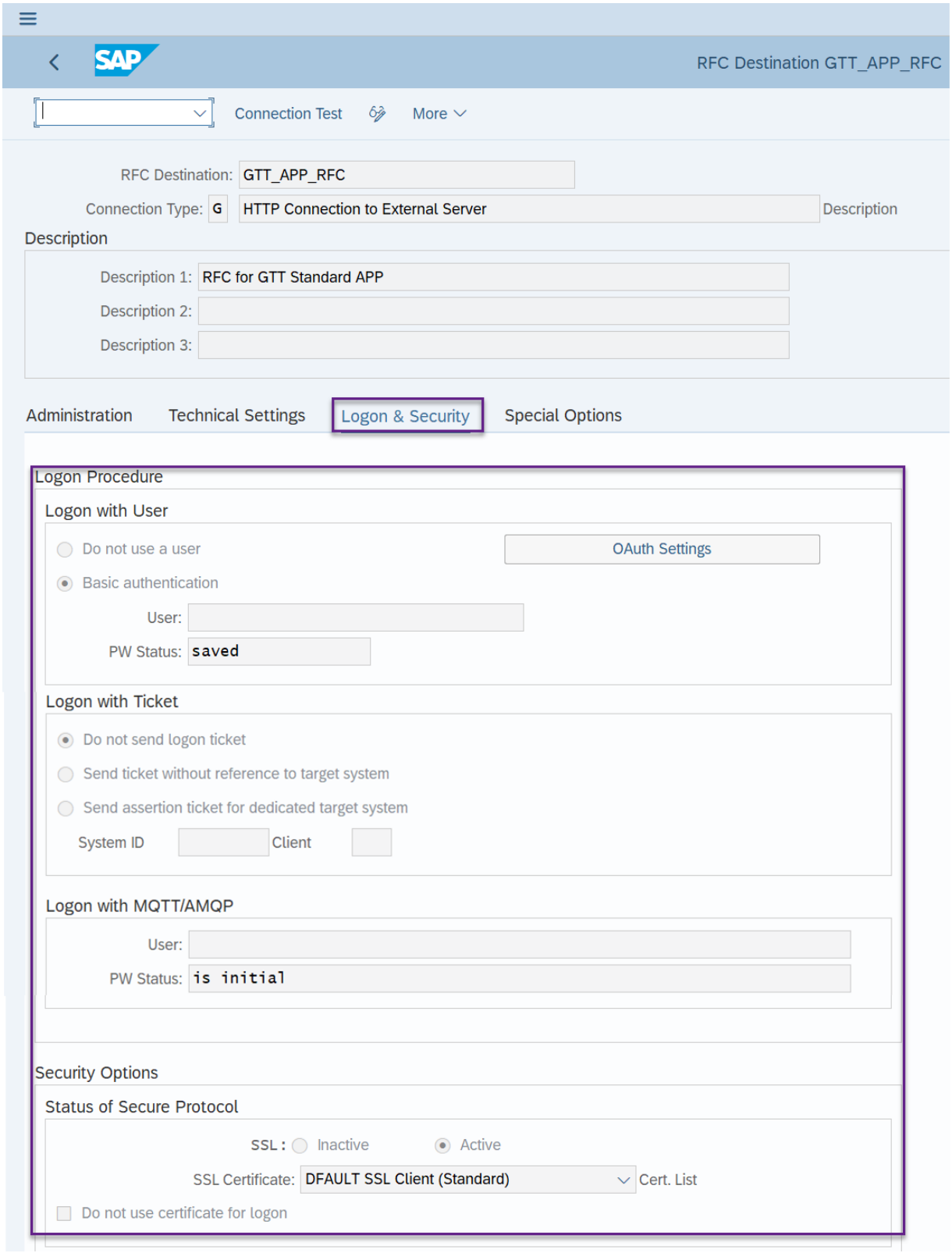
Path Prefix: */api/idoc/em/v1/TrackedProcessAndEvent*



3.4.6 In the **Logon & Security** tab, enter the Logon information.

For the basic authentication, the GTT technical user / password is needed. You can get this from your GTT administrator.

Also, SSL must be **Active**. The recommended SSL Certificate is: DFAULT SSL Client (Standard).



3.4.7 Save the configuration.

3.5 Define Ports

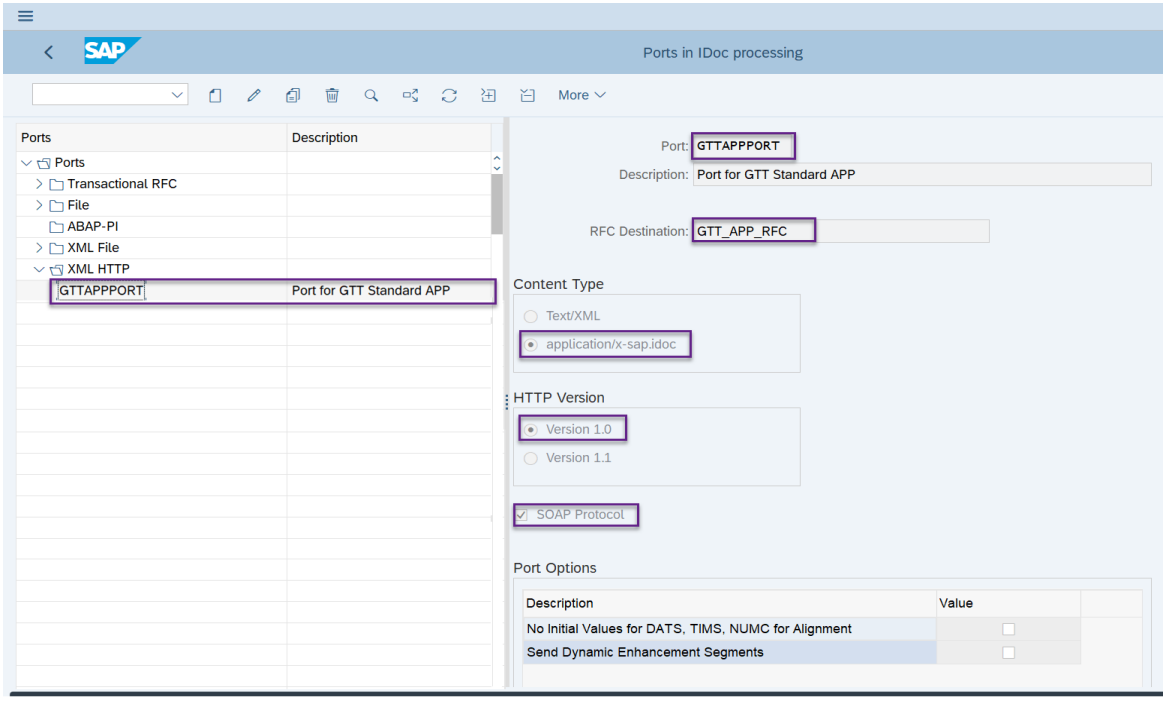
3.5.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **IDoc Settings.** Choose activity **Define Ports.**

3.5.2 Choose **XML HTTP** folder, and click **Create** to create a new port GTTAPPPORT.

3.5.3 Fill in the **RFC Destination.**

3.5.4 Choose **Content Type** as *application/x-sap.idoc*

3.5.5 *Choose* **HTTP Version** as Version 1.0. Mark it as SOAP Protocol.

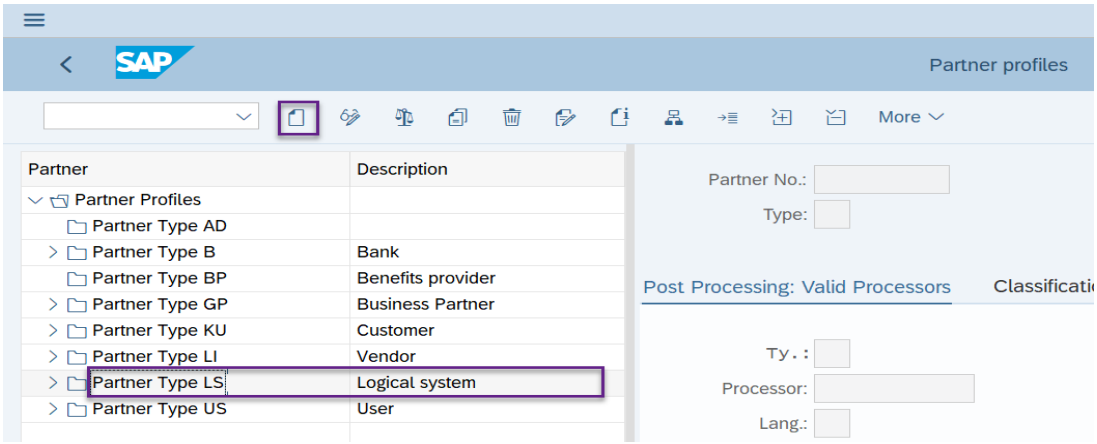


3.5.6 Save the configuration.

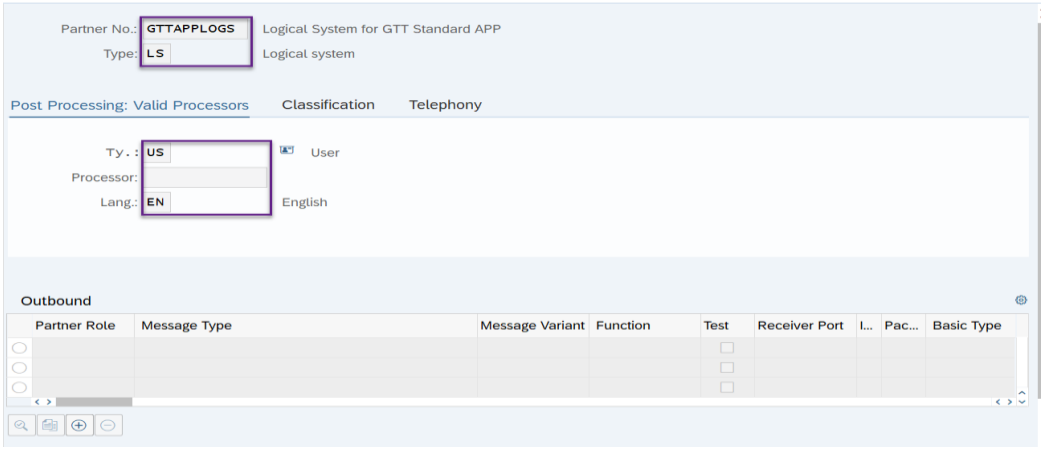
3.6 Define Partner Profiles

3.6.1 In **Display IMG** page, unfold **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **IDoc Settings.** Choose activity **Define Partner Profiles.**

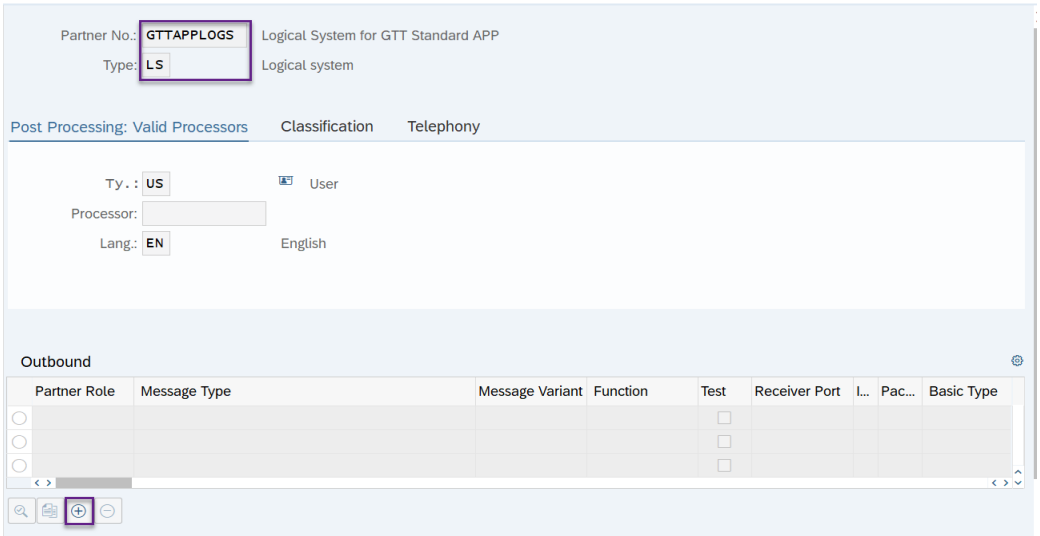
3.6.2 Choose **Partner Type LS** folder, and click **Create** to create a new partner profile.



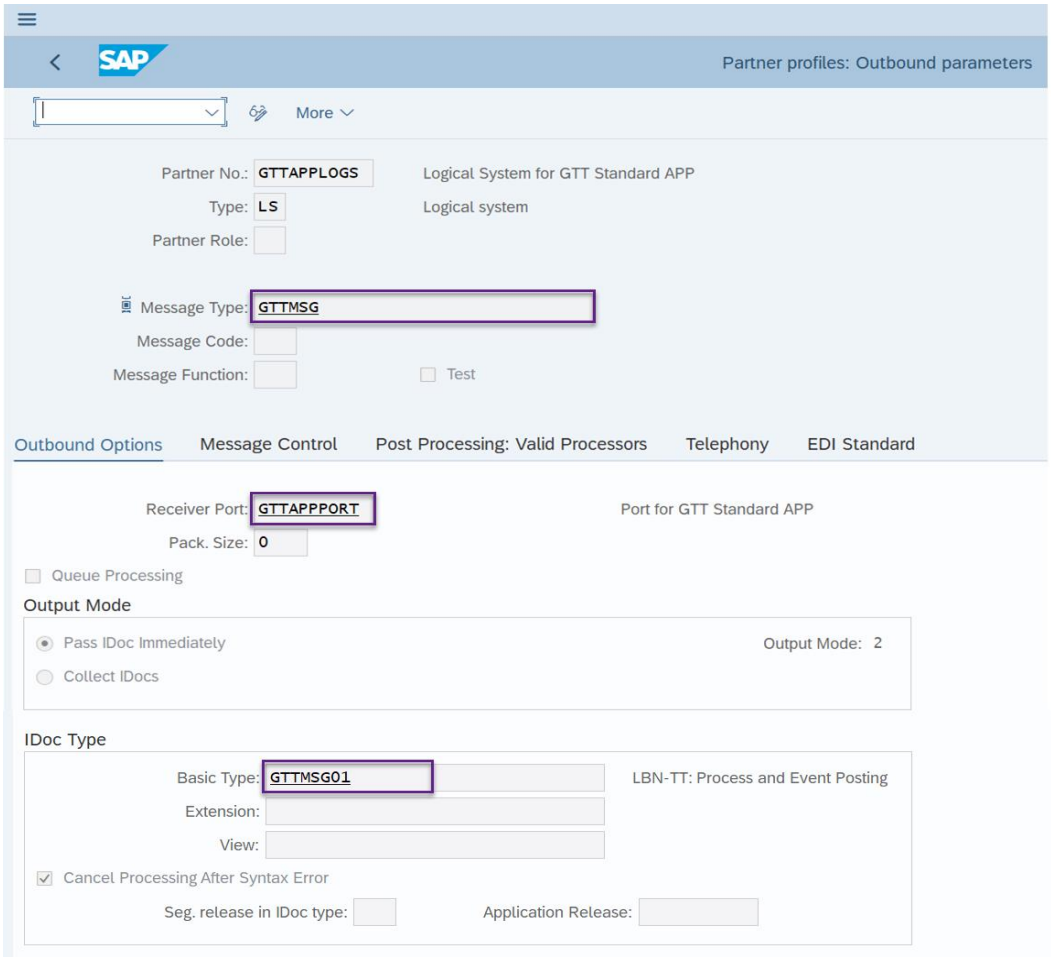
3.6.3 Fill in the **Partner No.** that you created and fill in the **Processor** information.



3.6.4 Click **Add** under **Outbound** box to create a new outbound parameter.



3.6.5 Fill in the **Message Type** GTTMSG and Fill in the **Receiver Port** that you created in 3.5.



3.6.6 Save the configuration.

3.7 Maintain AOT Type Restriction for Cross-Processes

Prerequisite:

ABAP code and BC set should be activated in the system.

The following entries should be maintained in transaction “ZGTT_AOTYPE_RST - AOT Types Restrictions” for Cross-Processes tracking scenario.

Restr.ID	Restr.Pos	Option	Sign	Application Obj.Type
FU_TO_IDLH	001	Equal To	Include	GTT_IDLV_HD
FU_TO_IDLI	001	Equal To	Include	GTT_IDLV_IT
SH_TO_IDLH	001	Equal To	Include	GTT_IDLV_HD
SH_TO_IDLI	001	Equal To	Include	GTT_IDLV_IT

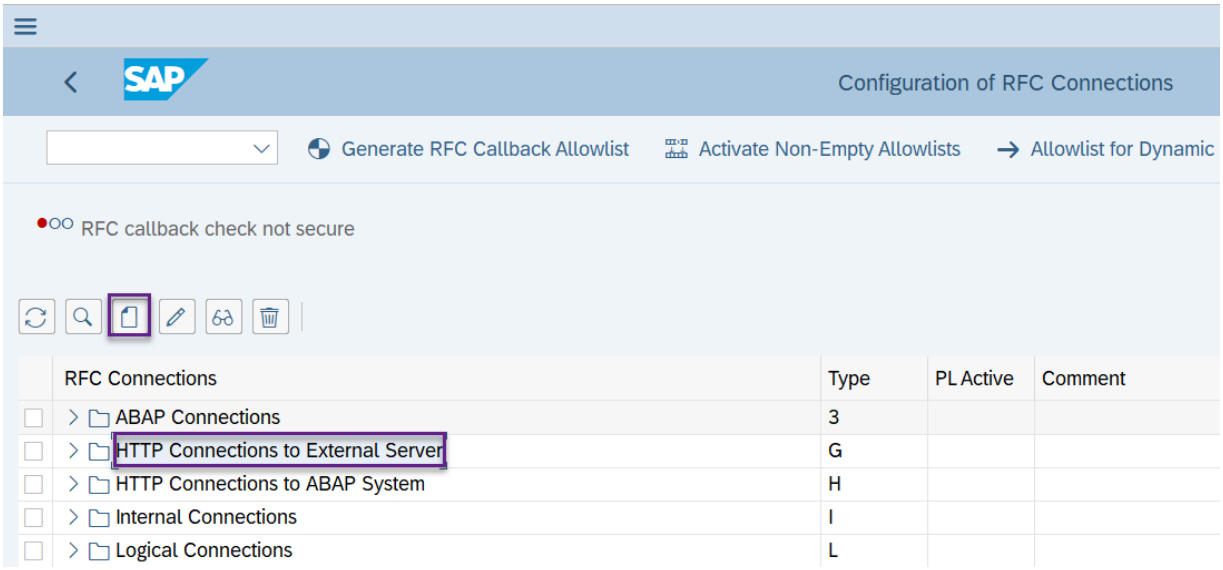
4. Configuration Option 2 (Manual Configuration)

4.1 Define RFC Connection for GTT

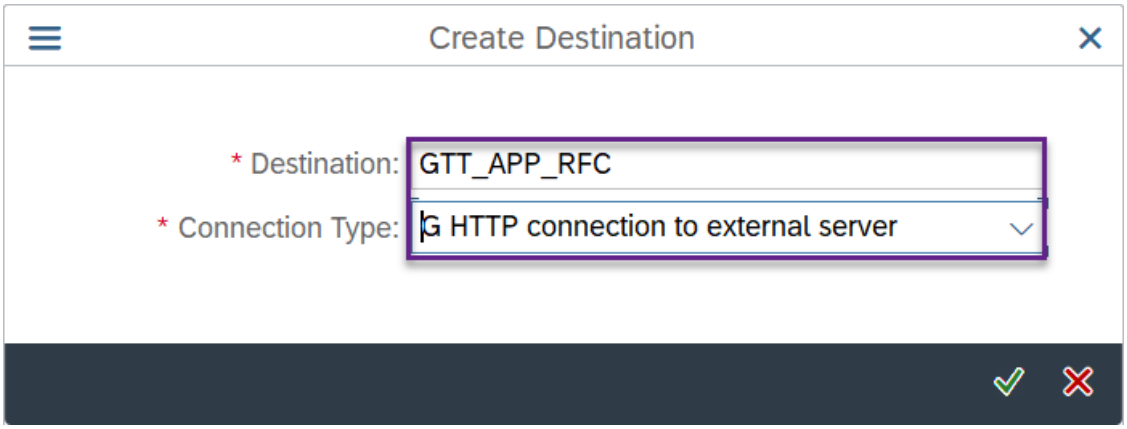
4.1.1 Log on to the business client, enter T-code *SPRO* and then click **SAP Reference IMG** to open **Display IMG page.**

4.1.2 Click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define System Configuration**. Choose activity: **Define RFC Connection for SAP GTT**

4.1.3 Choose **HTTP Connections to External Server**. Click **Create** to create a new RFC connection.



4.1.4 Fill in the **Destination** and choose the **Connection Type: 'G-HTTP connection to external server'**.



4.1.5 Enter a description. In the **Technical Settings** tab, fill in the **Host**, **Port** and **Path Prefix.**

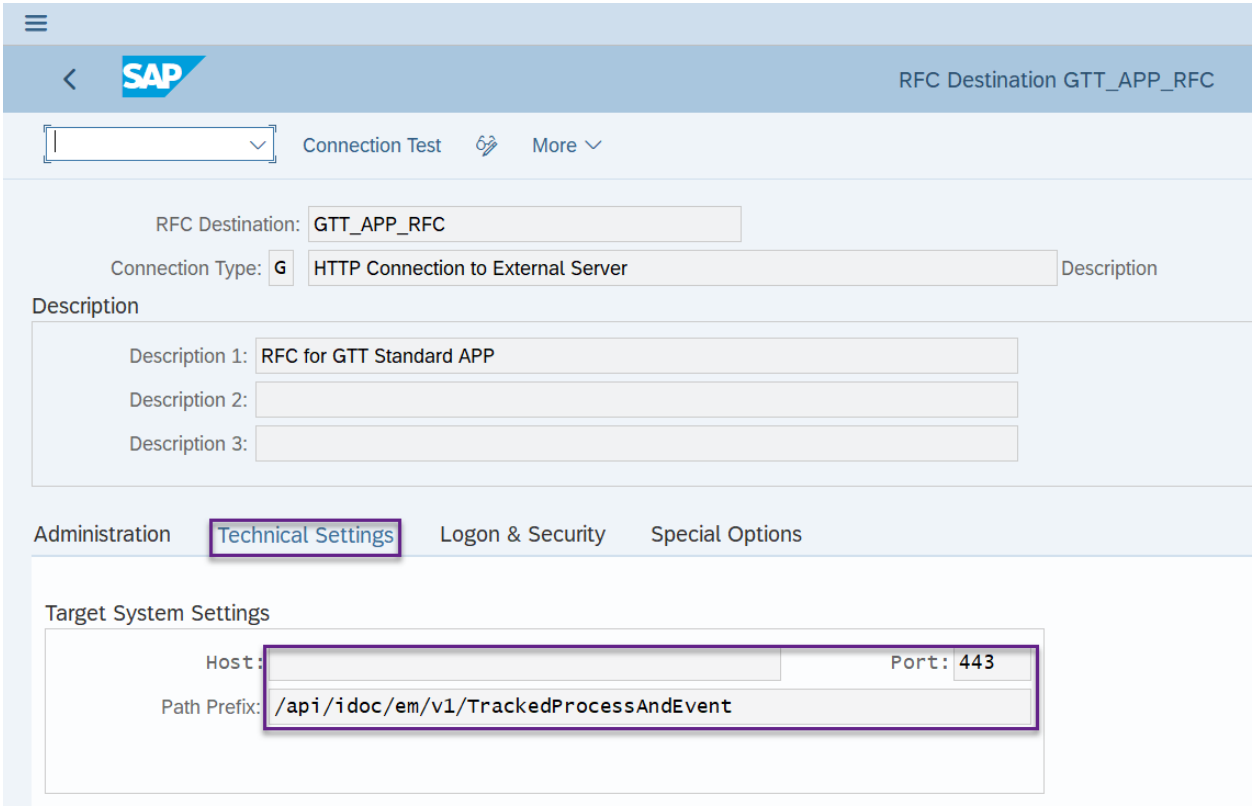
For example, the URL of solution owners is as follows :

https://sat-so-01.gtt-flp-lbnplatform-pre-live.cfapps.eu10.hana.ondemand.com/

Host: *sat-so-01.gtt-flp-lbnplatform-pre-live.cfapps.eu10.hana.ondemand.com*

Port: *443*

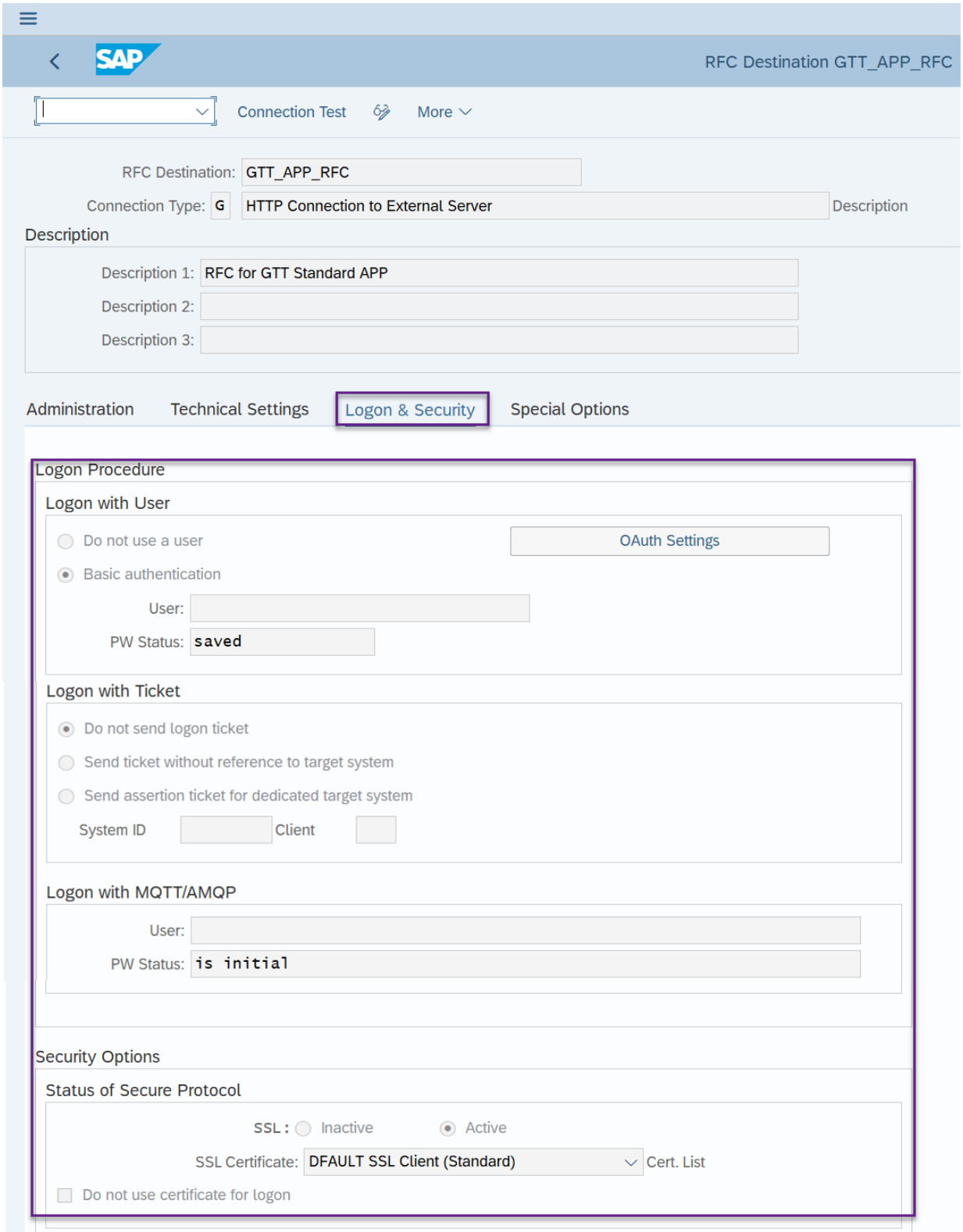
Path Prefix: */api/idoc/em/v1/TrackedProcessAndEvent*



4.1.6 In the **Logon & Security** tab, enter the Logon information.

For the basic authentication, the GTT technical user / password is needed. You can get this from your GTT administrator.

Also, SSL must be **Active**. The recommended SSL Certificate is: DFAULT SSL Client (Standard).

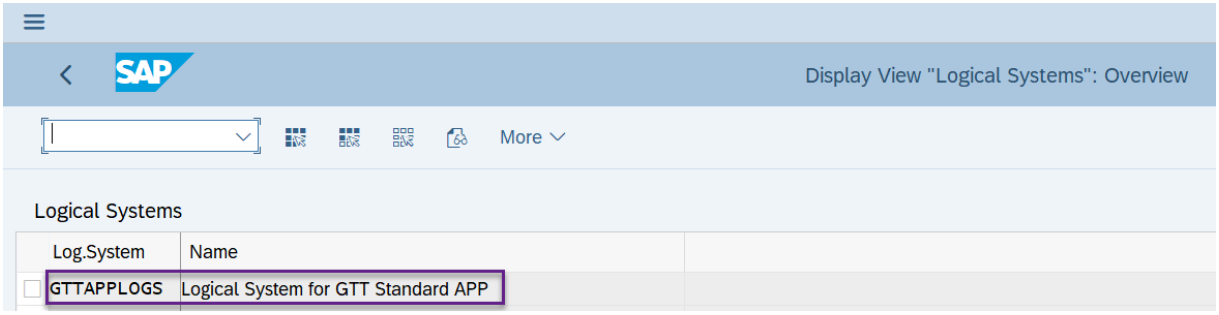


4.1.7 Save the configuration.

4.2 Define Logical System

4.2.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define System Configuration.** Choose activity **Define Logical System.**

4.2.2 Create **New Entries** to create a new Logical System, fill in the Logical System code and Name of the new logical system.



4.2.3 Save the configuration.

4.3 Define Ports

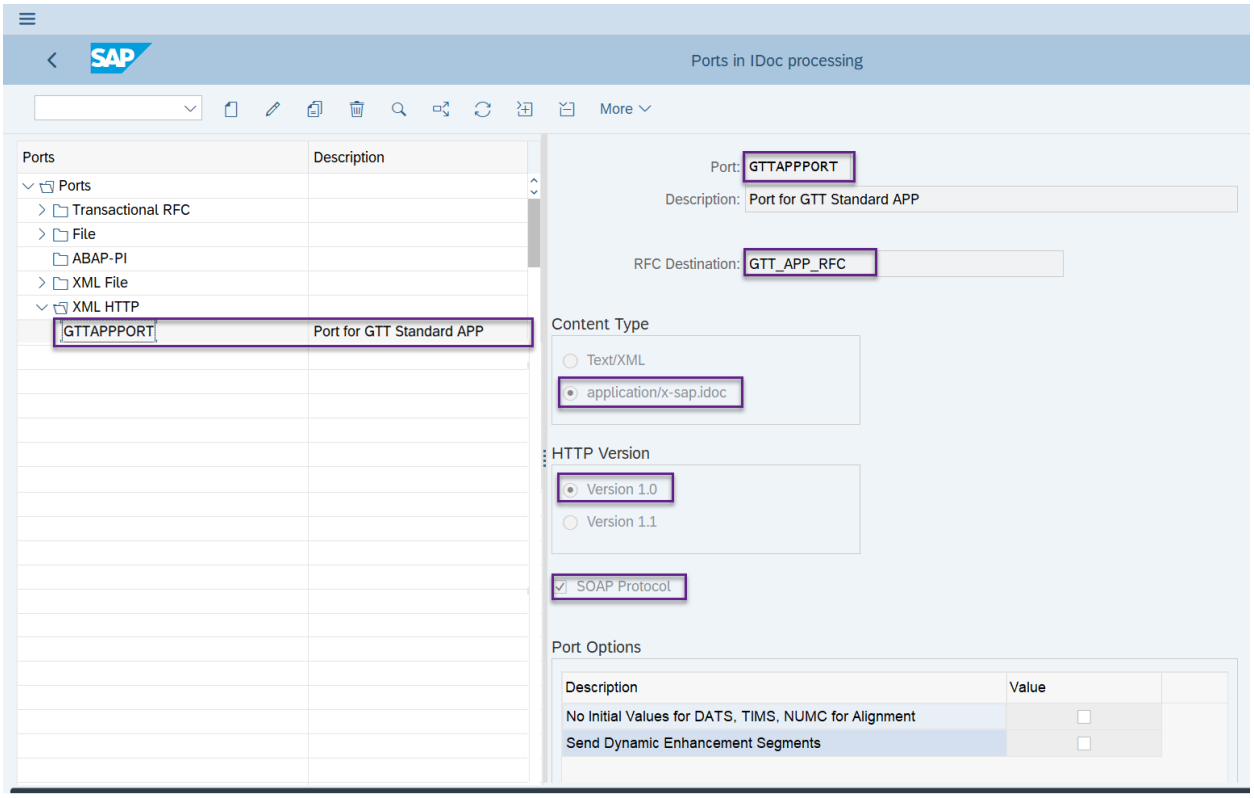
4.3.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **IDoc Settings.** Choose activity **Define Ports.**

4.3.2 Choose **XML HTTP** folder, and click **Create** to create a new port GTTAPPPORT.

4.3.3 Fill in the **RFC Destination.**

4.3.4 Choose **Content Type** as *application/x-sap.idoc*

4.3.5 Choose **HTTP Version** as Version 1.0. Mark it as SOAP Protocol.

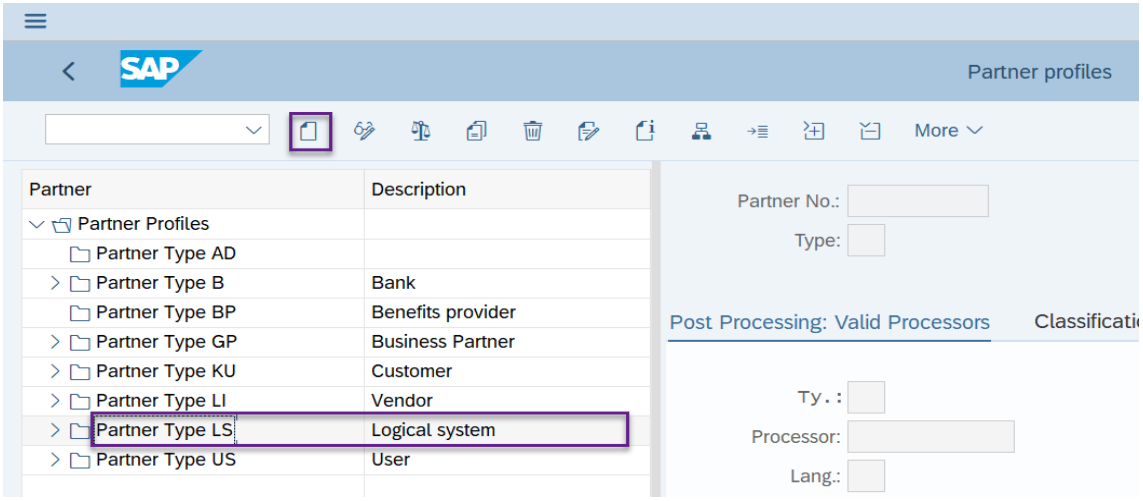


4.3.6 Save the configuration.

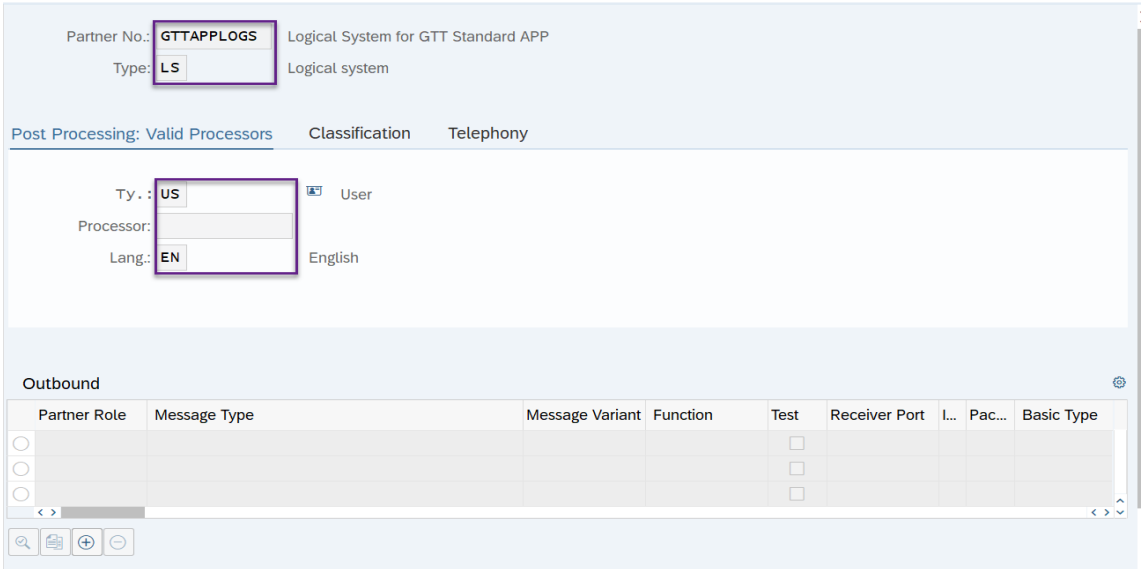
4.4 Define Partner Profiles

4.4.1 In **Display IMG** page, unfold **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **IDoc Settings.** Choose activity **Define Partner Profiles.**

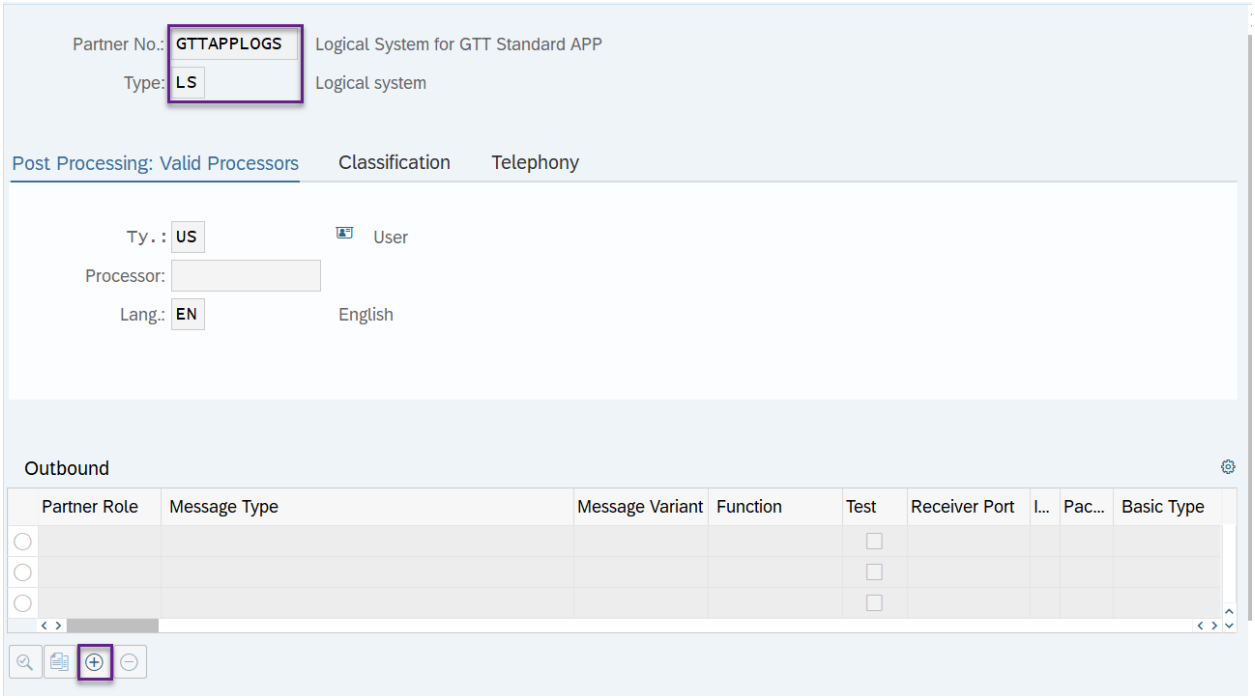
4.4.2 Choose **Partner Type LS** folder, and click **Create** to create a new partner profile.



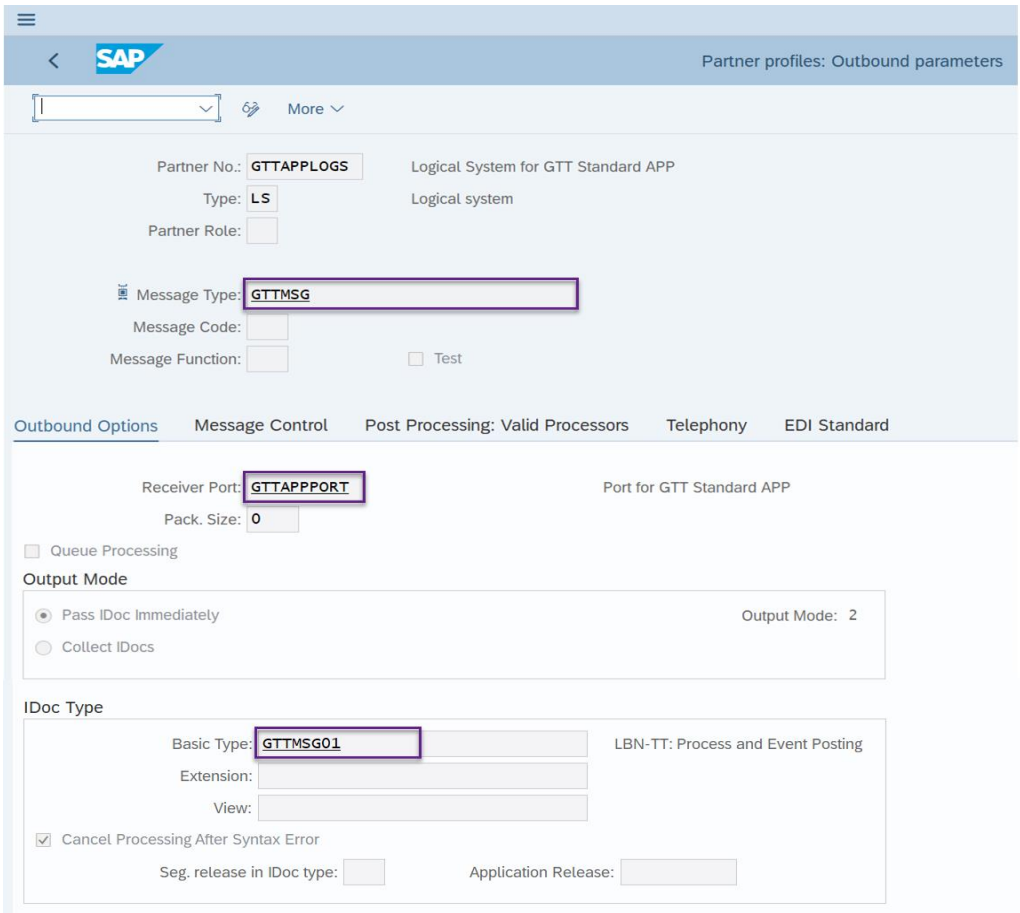
4.4.3 Fill in the **Partner No.** that you created and fill in the **Processor** information.



4.4.4 Click **Add** under the **Outbound** box to create a new outbound parameter.



4.4.5 Fill in the Message Type GTTMSG and Fill in the Receiver Port that you created in 4.3.



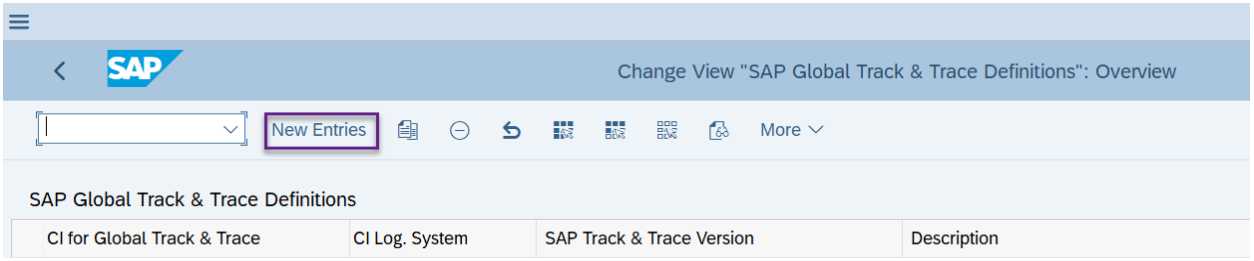
4.4.6 Save the configuration.

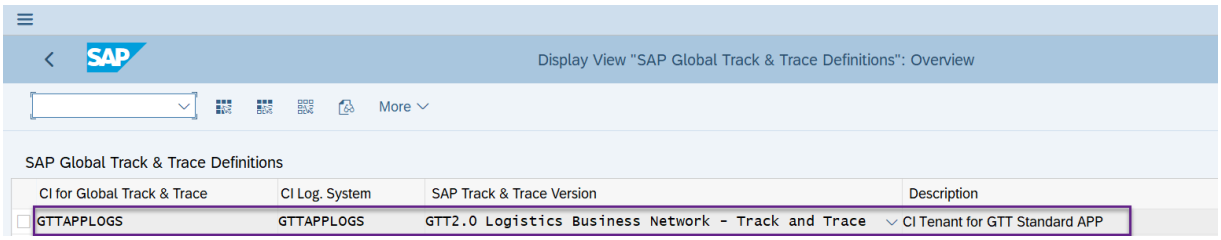
4.5 Define CI Tenant for GTT

4.5.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define Application Interface.**

Choose activity **Define CI Tenant for SAP GTT**.

4.5.2 Click **New Entries** to create a new CI tenant for GTT, fill in the information for the new CI tenant. The **CI Log. System** is the logical system you created in 4.2.



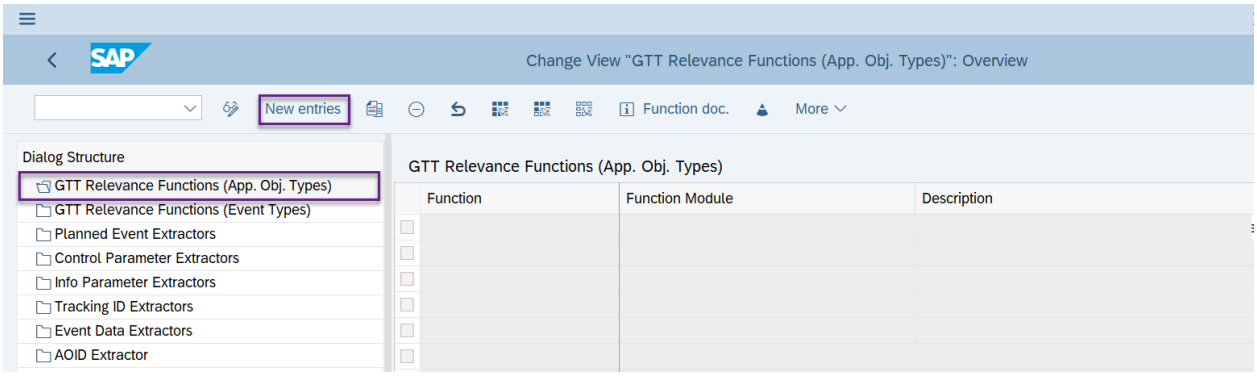


4.6 Define GTT Extraction Functions

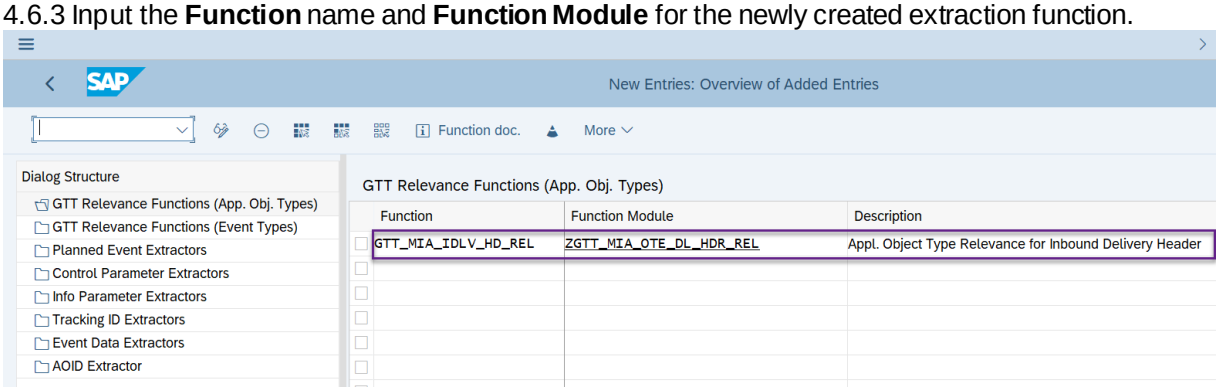
Prerequisite:
You have already installed ABAPGit and downloaded the code of Fulfillment Tracking apps in your development system.

4.6.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define Application Interface.** Choose activity **Define SAP GTT Extraction Functions.**

4.6.2 Choose the type of Extraction Function you want to create from the **Dialog Structure,** and click **New entries.**



4.6.3 Input the **Function** name and **Function Module** for the newly created extraction function.



4.6.4 Click **Save.**

Hint:
After completing the configuration of 'Define GTT Extraction Functions', the configuration should be as follows:

Category	Extractor	Function Module Name	Description
Control Parameter Extractors	GTT_MIA_IDLV_HD_OTE	ZGTT_MIA_OTE_DL_HDR	Control Parameter Extractor for Inbound Delivery Header
	GTT_MIA_IDLV_IT_OTE	ZGTT_MIA_OTE_DL_ITEM	Control Parameter Extractor for Inbound Delivery Item
	GTT_MIA_SHP_HD_OTE	ZGTT_MIA_OTE_SH_HDR	Control Parameter Extractor for Shipment Header
	GTT_TS_FO_HD_OTE	ZGTT_STS_OTE_FO_HDR	Control Parameter Extractor for Freight Order and Freight Booking
	GTT_TS_FU_HD_OTE	ZGTT_STS_OTE_FO_HDR	Control Parameter Extractor for Freight Unit
Event Data Extractors	GTT_MIA_IDLV_HD_GR	ZGTT_MIA_EE_DL_HDR_GR	Actual event Inbound Delivery Header Goods Receipt
	GTT_MIA_IDLV_IT_PA	ZGTT_MIA_EE_DL_ITEM_PA	Actual event Inbound Delivery Item Put Away
	GTT_MIA_IDLV_IT_PKNG	ZGTT_MIA_EE_DL_ITEM_PKNG	Actual event Inbound Delivery Item Packing
	GTT_MIA_SHP_HD_ARR	ZGTT_MIA_EE_SH_HDR_ARR	Actual event Shipment Header Arrival
	GTT_MIA_SHP_HD_CI	ZGTT_MIA_EE_SH_HDR_CI	Actual event Shipment Header Check In
	GTT_MIA_SHP_HD_DEP	ZGTT_MIA_EE_SH_HDR_DEP	Actual event Shipment Header Departure
	GTT_MIA_SHP_HD_LE	ZGTT_MIA_EE_SH_HDR_LE	Actual event Shipment Header Load End
	GTT_MIA_SHP_HD_LS	ZGTT_MIA_EE_SH_HDR_LS	Actual event Shipment Header Load Start
	GTT_TS_TOR_ARRIVAL	ZGTT_STS_EE_FO_ARRIVAL	Actual Event FO/FB/FU Proof of Arrival
	GTT_TS_TOR_COUPLING	ZGTT_STS_EE_FO_COUPLING	Actual Event FO/FB/FU Coupling
	GTT_TS_TOR_DECOUPL	ZGTT_STS_EE_FO_DECOUPLING	Actual Event FO/FB/FU Decoupling
	GTT_TS_TOR_DELAY	ZGTT_STS_EE_FO_DELAY	Actual Event FO/FB/FU Delay

	GTT_TS_TOR_DEPART	ZGTT_STS_EE_FO_DEPARTURE	Actual Event FO/FB/FU Proof of Departure
	GTT_TS_TOR_FU_DELAY	ZGTT_STS_EE_FU_DELAY	Actual Event FO/FB/FU FU Delay
	GTT_TS_TOR_LOAD_END	ZGTT_STS_EE_FO_LOAD_END	Actual Event FO/FB/FU Loading End
	GTT_TS_TOR_LOAD_STR	ZGTT_STS_EE_FO_LOAD_START	Actual Event FO/FB/FU Loading Start
	GTT_TS_TOR_POD	ZGTT_STS_EE_FO_POD	Actual Event FO/FB/FU Proof of Delivery
	GTT_TS_TOR_POPU	ZGTT_STS_EE_FO_POPU	Actual Event FO/FB/FU Proof of Pick-Up
	GTT_TS_TOR_UNLD_END	ZGTT_STS_EE_FO_UNLOAD_END	Actual Event FO/FB/FU Unloading End
	GTT_TS_TOR_UNLD_STR	ZGTT_STS_EE_FO_UNLOAD_START	Actual Event FO/FB/FU Unloading Start
Planned Event Extractors	GTT_MIA_IDLV_HD_EE	ZGTT_MIA_EE_DL_HDR	Selection of EEs for Inbound Delivery Header
	GTT_MIA_IDLV_IT_EE	ZGTT_MIA_EE_DL_ITEM	Selection of EEs for Inbound Delivery Item
	GTT_MIA_SHP_HD_EE	ZGTT_MIA_EE_SH_HDR	Selection of EEs for Shipment Header
	GTT_TS_FO_HD_EE	ZGTT_STS_EE_FO_HDR	Selection of EEs for FO/FB Header
	GTT_TS_FU_HD_EE	ZGTT_STS_EE_FO_HDR	Selection of EEs for FU Header
Tracking ID Extractors	GTT_MIA_IDLV_HD_TID	ZGTT_MIA_OTE_DL_HDR_TID	Tracking ID Extractor for Inbound Delivery Header
	GTT_MIA_IDLV_IT_TID	ZGTT_MIA_OTE_DL_ITEM_TID	Tracking ID Extractor for Inbound Delivery Item
	GTT_MIA_SHP_HD_TID	ZGTT_MIA_OTE_SH_HDR_TID	Tracking ID Extractor for Shipment Header
	GTT_TS_FO_HD_TID	ZGTT_STS_OTE_FO_HEADER_TID	Tracking ID Extractor for Freight Order and Freight Booking
	GTT_TS_FU_HD_TID	ZGTT_STS_OTE_FO_HEADER_TID	Tracking ID Extractor for Freight Unit
GTT relevance function of AOT	GTT_MIA_IDLV_HD_REL	ZGTT_MIA_OTE_DL_HDR_REL	Appl. Object Type Relevance for Inbound Delivery Header
	GTT_MIA_IDLV_IT_REL	ZGTT_MIA_OTE_DL_ITEM_REL	Appl. Object Type Relevance for Inbound Delivery Item
	GTT_MIA_SHP_HD_REL	ZGTT_MIA_OTE_SH_HDR_REL	Appl. Object Type Relevance for Shipment Header
	GTT_TS_FO_HD_REL	ZGTT_STS_OTE_FO_HDR_REL	Appl. Object Type Relevance for FO/FB Header
	GTT_TS_FU_HD_REL	ZGTT_STS_OTE_FO_HDR_REL	Appl. Object Type Relevance for FU Header
GTT relevance function of Event Type	GTT_MIA_IDLV_HD_GR	ZGTT_MIA_EE_DL_HDR_GR_REL	Relevance function for Actual event Delivery Header Goods Receipt
	GTT_MIA_IDLV_IT_PA	ZGTT_MIA_EE_DL_ITEM_PA_REL	Relevance function for Actual event Delivery Item Put Away

	GTT_MIA_IDLV_IT_PKNG	ZGTT_MIA_EE_DL_ITEM_PKNG_REL	Relevance function for Actual event Delivery Item Packing
	GTT_MIA_SHP_HD_ARR	ZGTT_MIA_EE_SH_HDR_ARR_REL	Relevance function for Actual event Shipment Header Arrival
	GTT_MIA_SHP_HD_CI	ZGTT_MIA_EE_SH_HDR_CI_REL	Relevance function for Actual event Shipment Header Check In
	GTT_MIA_SHP_HD_DEP	ZGTT_MIA_EE_SH_HDR_DEP_REL	Relevance function for Actual event Shipment Header Departure
	GTT_MIA_SHP_HD_LE	ZGTT_MIA_EE_SH_HDR_LE_REL	Relevance function for Actual event Shipment Header Load End
	GTT_MIA_SHP_HD_LS	ZGTT_MIA_EE_SH_HDR_LS_REL	Relevance function for Actual event Shipment Header Load Start
	GTT_TS_TOR_ARRIVE	ZGTT_STS_EE_FO_ARRIVAL_REL	Relevance function for Actual event FO/FB/FU Arrival
	GTT_TS_TOR_COUP	ZGTT_STS_EE_FO_COUPLING_REL	Relevance function for Actual event FO/FB/FU Coupling
	GTT_TS_TOR_DECP	ZGTT_STS_EE_FO_DECOUPLING_REL	Relevance function for Actual event FO/FB/FU Decoupling
	GTT_TS_TOR_DELAY	ZGTT_STS_EE_FO_DELAY_REL	Relevance function for Actual event FO/FB/FU Delay
	GTT_TS_TOR_DEPART	ZGTT_STS_EE_FO_DEPARTURE_REL	Relevance function for Actual event FO/FB/FU Departure
	GTT_TS_TOR_FU_DELAY	ZGTT_STS_EE_FU_DELAY_REL	Relevance function for Actual event FO/FB/FU Freight Unit Delay
	GTT_TS_TOR_LEND	ZGTT_STS_EE_FO_LOAD_END_REL	Relevance function for Actual event FO/FB/FU Loading End
	GTT_TS_TOR_LSTR	ZGTT_STS_EE_FO_LOAD_START_REL	Relevance function for Actual event FO/FB/FU Loading Start
	GTT_TS_TOR_POD	ZGTT_STS_EE_FO_POD_REL	Relevance function for Actual event FO/FB/FU Proof of Delivery
	GTT_TS_TOR_POPU	ZGTT_STS_EE_FO_POPU_REL	Relevance function for Actual event FO/FB/FU Proof of Pick Up
	GTT_TS_TOR_UEND	ZGTT_STS_EE_FO_UNLOAD_END_REL	Relevance function for Actual event FO/FB/FU Unloading End
	GTT_TS_TOR_USTR	ZGTT_STS_EE_FO_UNLOAD_STRT_REL	Relevance function for Actual event FO/FB/FU Unloading Start
AOID Extractor	GTT_MIA_IDLV_HD_AOID	ZGTT_MIA_AOID_DL_HDR	AOID Extractor for Inbound Delivery Header
	GTT_MIA_IDLV_IT_AOID	ZGTT_MIA_AOID_DL_ITEM	AOID Extractor for Inbound Delivery Item

	GTT_MIA_SHP_HD_AOID	ZGTT_MIA_AOID_SH_HDR	AOID Extractor for Shipment Header
	GTT_STS_AOID_TOR	ZGTT_STS_AOID_TOR	AOID Extractor for FU/FO/FB

4.7 Define Used Business Process Types, Appl. Object Types and Event Types

4.7.1 In **Display IMG** page, click **Integration with Other SAP Components** -> **Interface to Global Track and Trace** -> **Define Application Interface.**

Choose activity **Define Used Business Process Types, Appl. Object Types and Event Types.**

4.7.2 You can create event types and application object types for each business process type.

The following sections from 4.8 to 4.11 only demonstrate how to configure relevant objects. For actual configuration, refer to the scenarios configuration listed below.

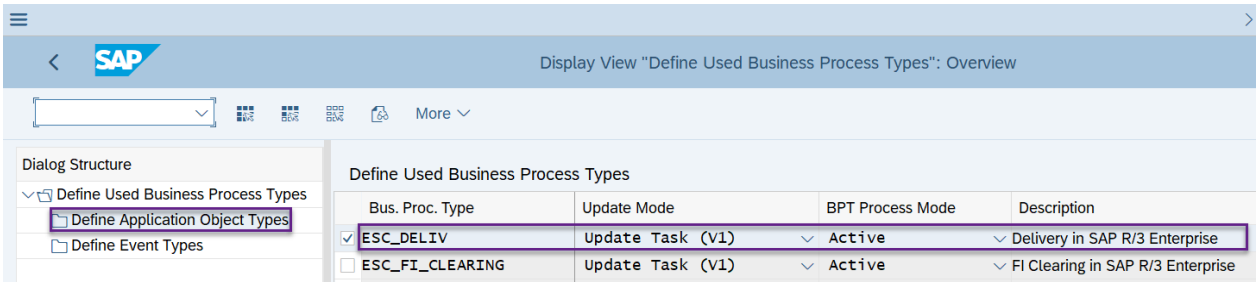
Scenarios configuration:
1) Inbound delivery -> Shipment.
For this scenario, see the following configurations:
4.12 Inbound Delivery Extractor Configuration
4.13 Shipment Extractor Configuration

2) Inbound delivery -> Freight Unit -> Road Freight Order/Ocean/Air booking.
For this scenario, see the following configurations:
4.12 Inbound Delivery Extractor Configuration
4.14 Freight Unit Extractor Configuration
4.15 Road Freight Order/Ocean/Air booking Extractor Configuration

4.8 Define Application Object Types for Header Level Extractor

4.8.1 As an example of AOT type's header level tracking introduction, choose the business process type ESC_DELIV from the **Define Used Business Process Types** on the right side.

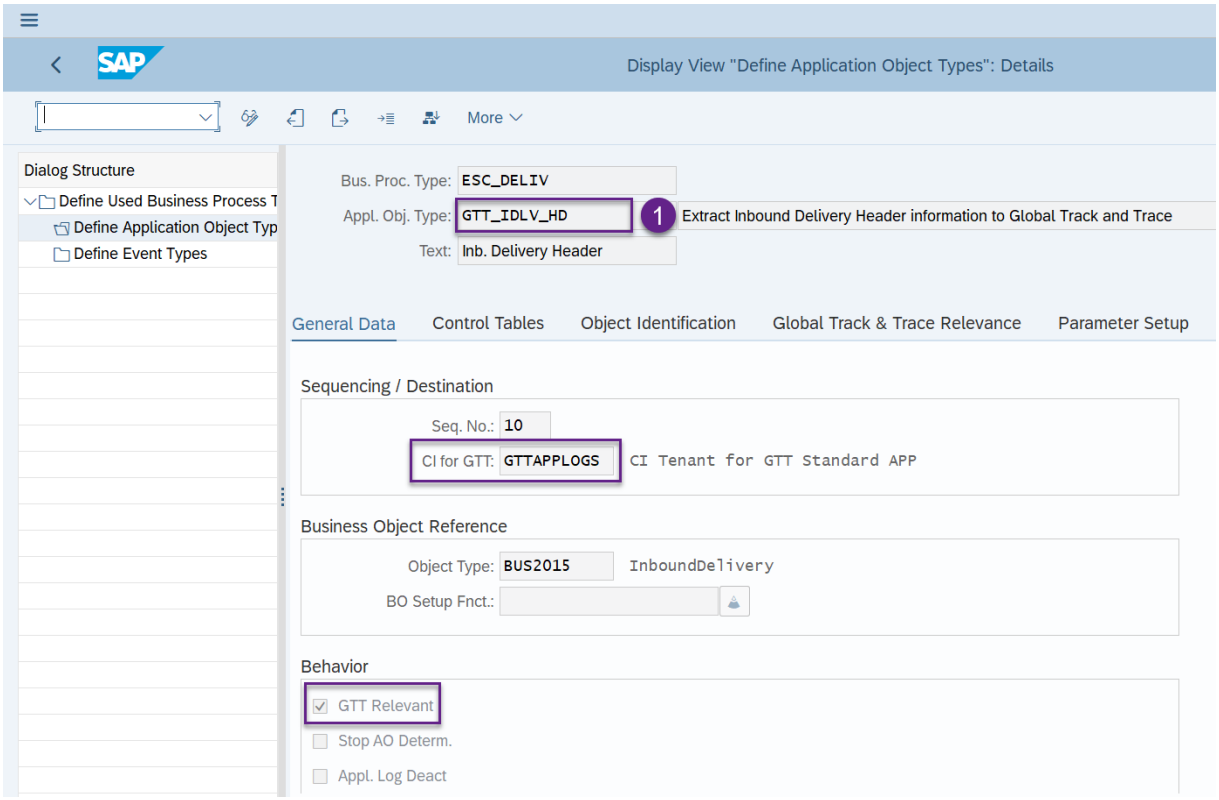
Double click **Define Application Object Types.**



4.8.2 Click **New Entries** to create a new Application Object Type.

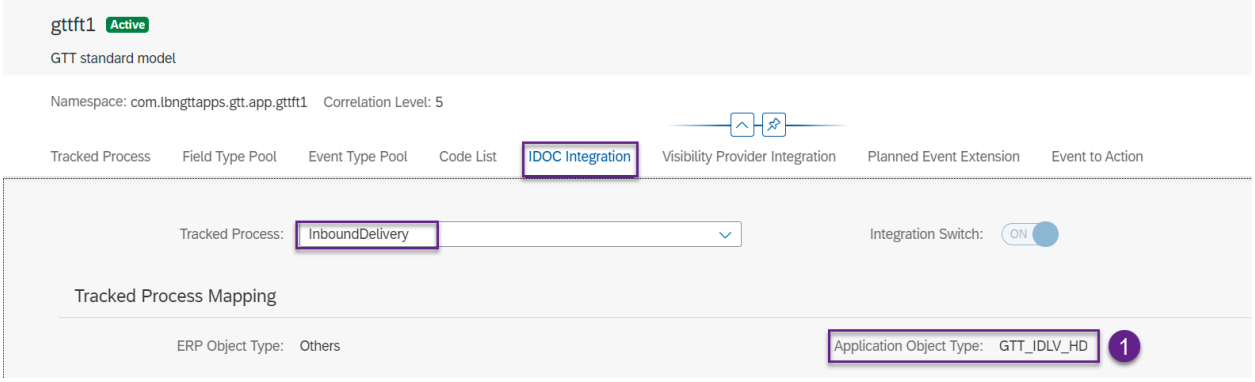
4.8.3 Fill in the **Application Object Type** and **Text** fields.

4.8.4 Fill in the information required in the **General Data** tab. **CI for GTT** is the CI Tenant you created in 4.5. Check **GTT Relevant.**

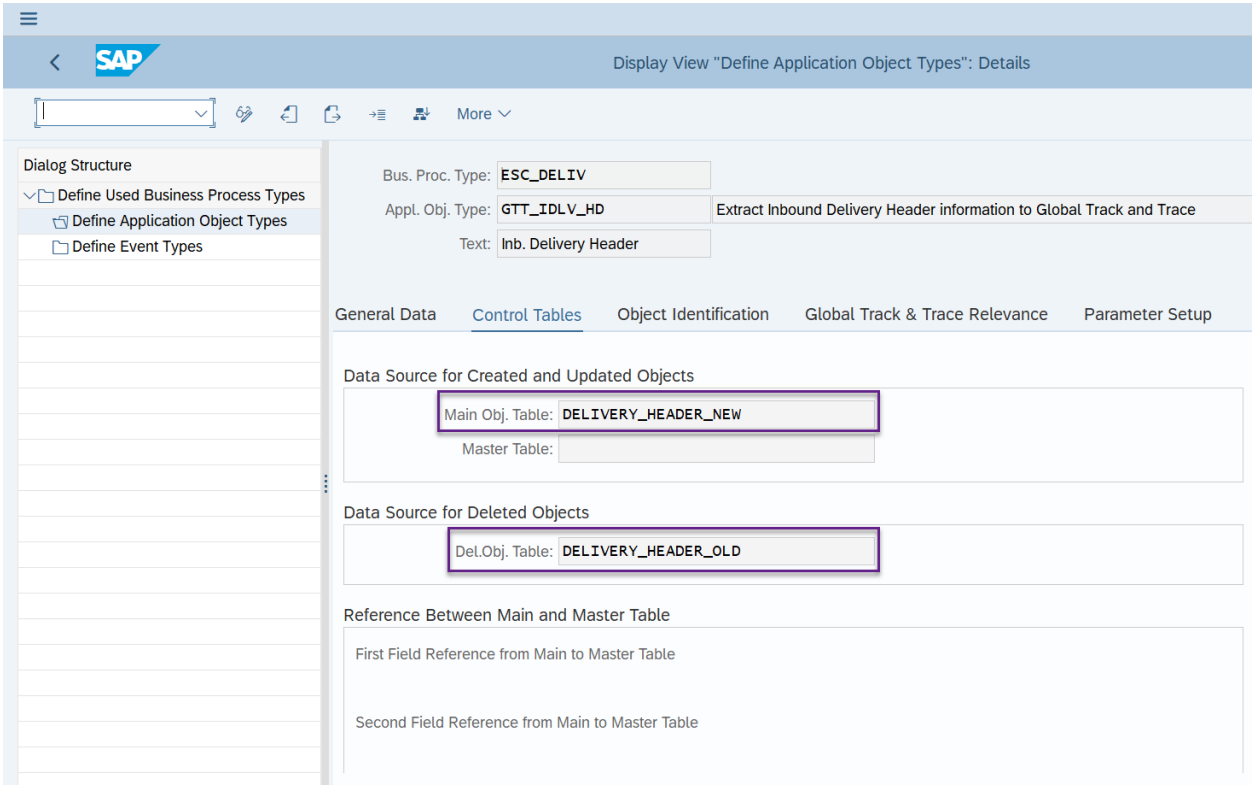


Hint:

When you are creating Application Object Type for one Business Process Type, make sure the AOT name must be the same name defined in the corresponding model in the *Manage Models* app in GTT Version 2.



4.8.5 Fill in the **Main Object table** and **Master Table** in the **Control Tables** tab.

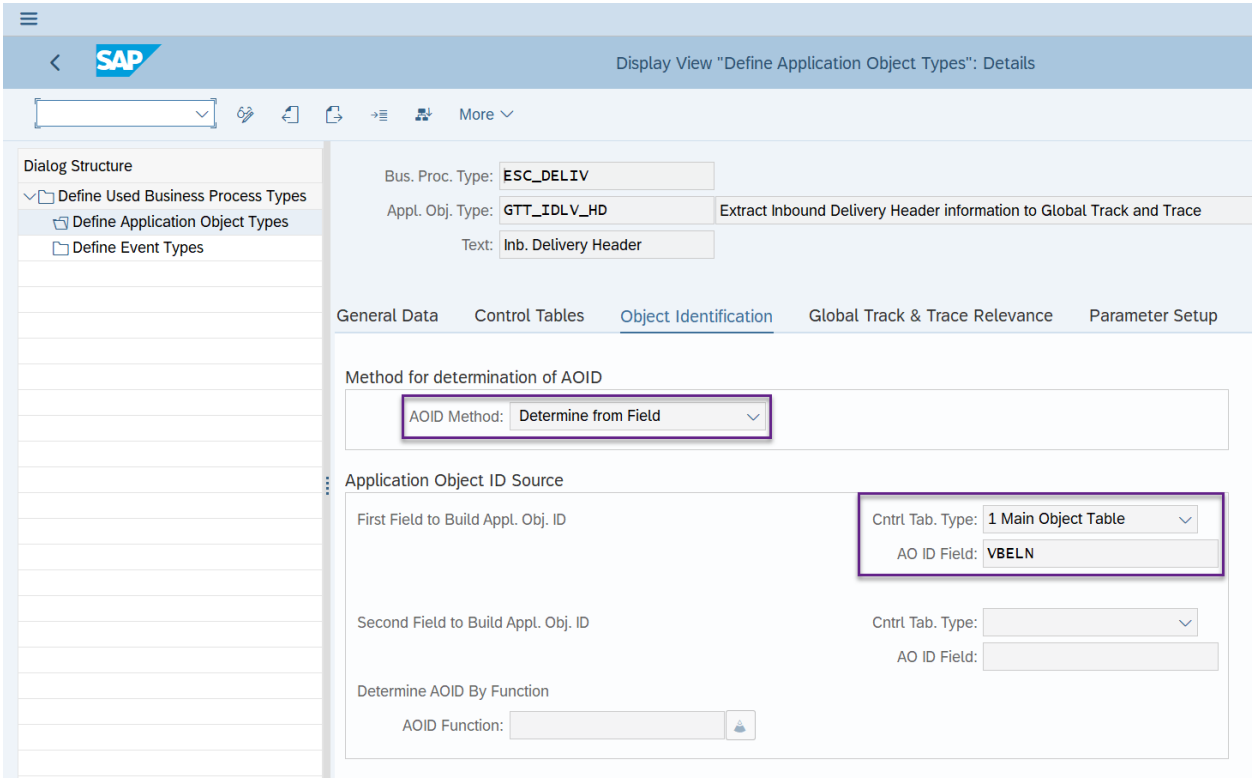


Note:

If the event type or application object type is on the header level, then you only need to assign the **Main Object Table**.

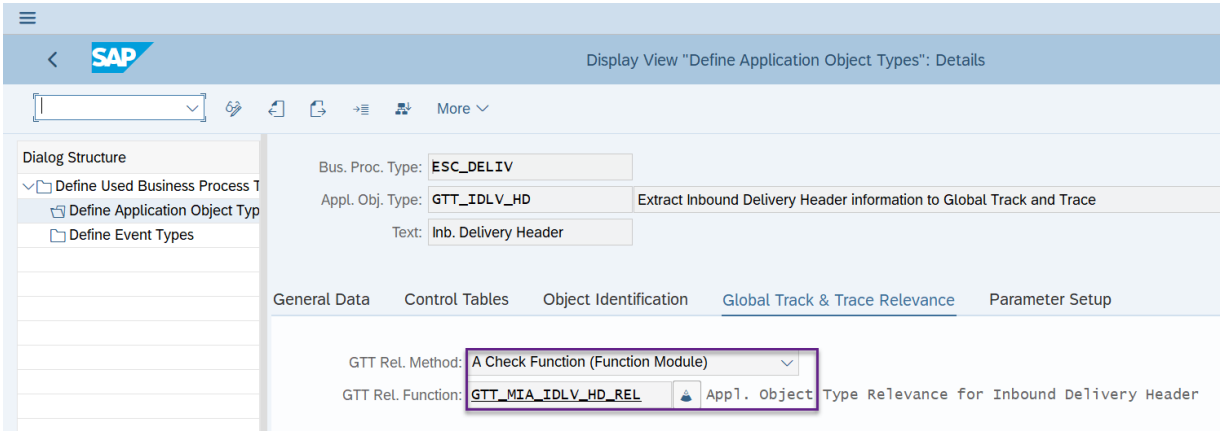
If the event type or application object type is on the item level, then you need to assign the **Main Object Table** and **Master Table**, and assign the reference between the **Main Object Table** and **Master Table**.

4.8.6 If there is no customized logic to determine the AOT ID, choose **Determine from Field**, and use the key field to fill the AO ID fields. When choosing **Determine by Function**, you must enter the customized information in the AOID function field.



4.8.7 In the **Global Track & Trace Relevance** tab, choose the **GTT Relevance Method** you need.

If you choose the **GTT Relevance Method** as *Check Function*, then you need to define a relevance function according to 4.6, and fill in the relevance function name here.



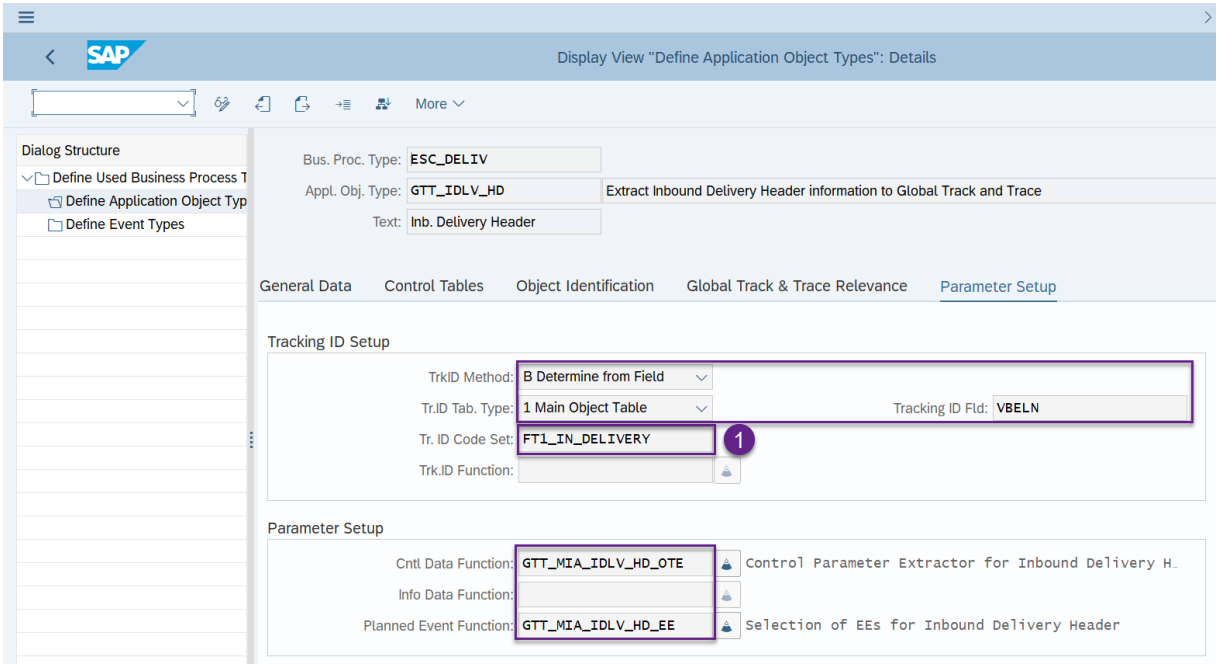
4.8.8 In the **Parameter Setup** tab, choose the **TrkID Method** as you need.

If you choose the **TrkID Method** as *Determine by Function*, then you need to define a tracking ID function according to 4.6, and fill in the relevance function name here.

If no customized logic exists, for **TrkID Method** choose *Determine from Field,* then you need to fill the key field and name the Code Set for the AOT.

Fill in the extractor functions for **Control Data, Info Data(optional), Planned Event.**

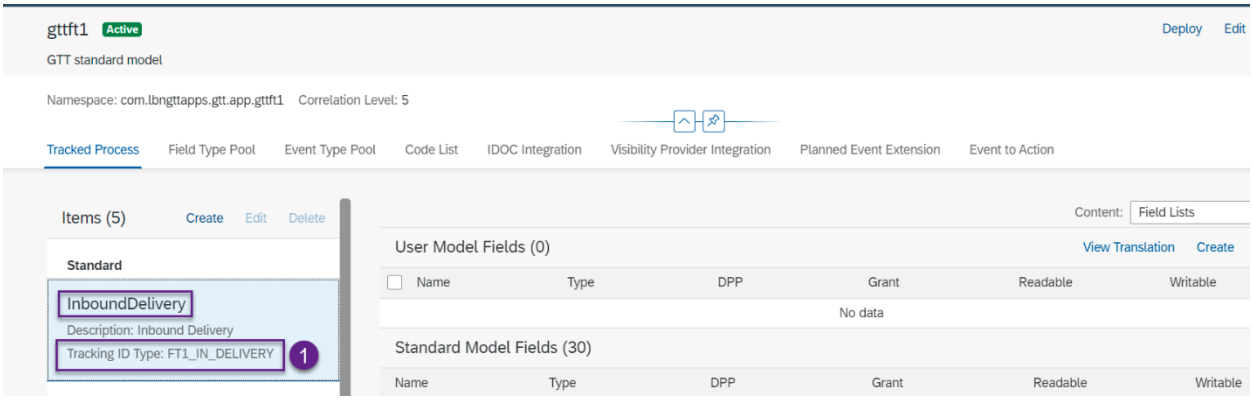
Click **Save**.



Hint:

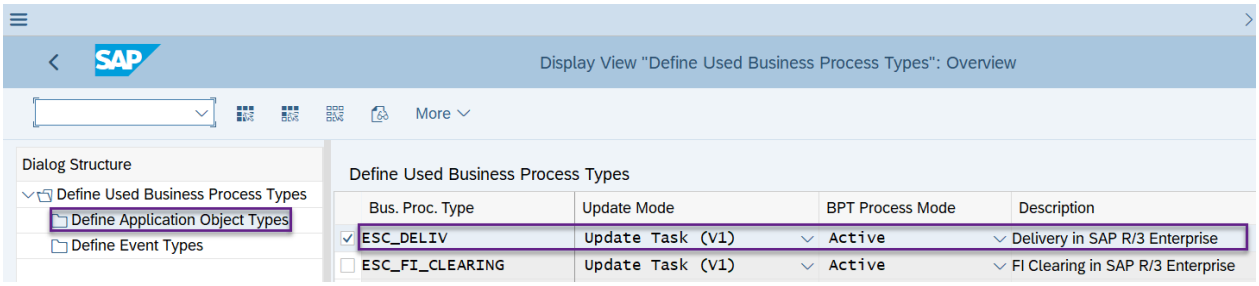
In the AOT you maintained, make sure the name of Tracking ID Type is the same name defined in the corresponding process type of the model in the *Manage Models* app in GTT Version 2.

If the Tracking ID Type is determined by Field, input the value source field in the Tracking ID field, and the Code Set that refers to the Tracking ID Type for the AOT as below.



4.9 Define Application Object Types for Item Level Extractor

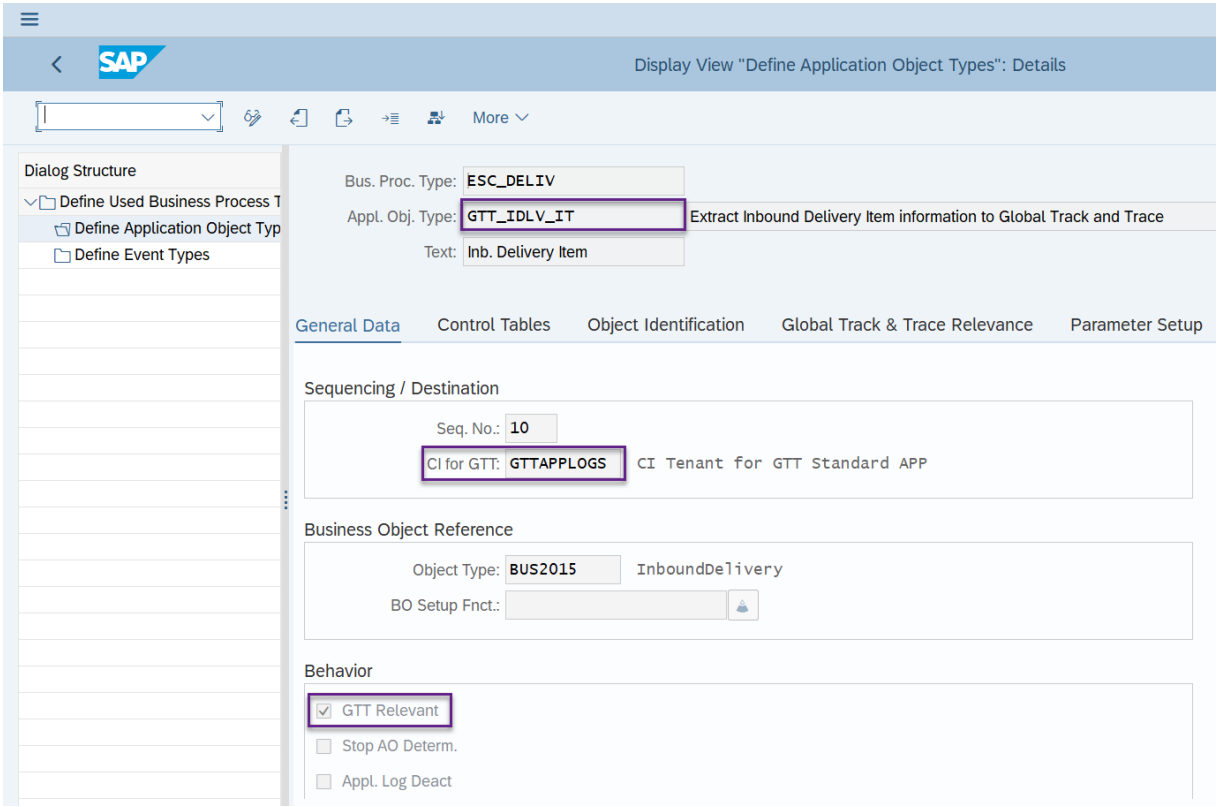
4.9.1 As an example of AOT type's item level tracking introduction, choose the business process type ESC_DELIV from the **Define Used Business Process Types** on the right side. Double click **Define Application Object Types.**



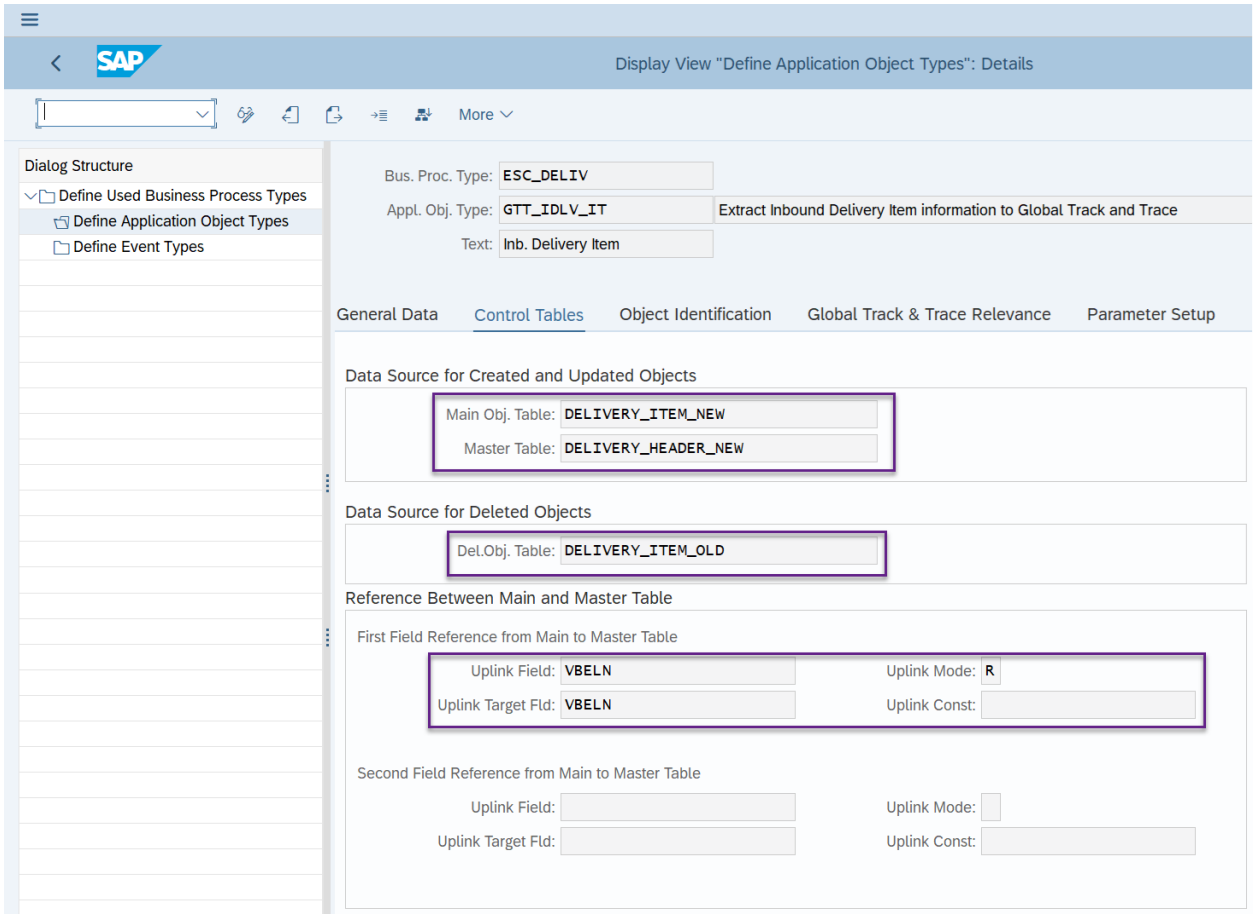
4.9.2 Click **New Entries** to create a new Application Object Type.

4.9.3 Fill in the **Application Object Type** and **Text** fields.

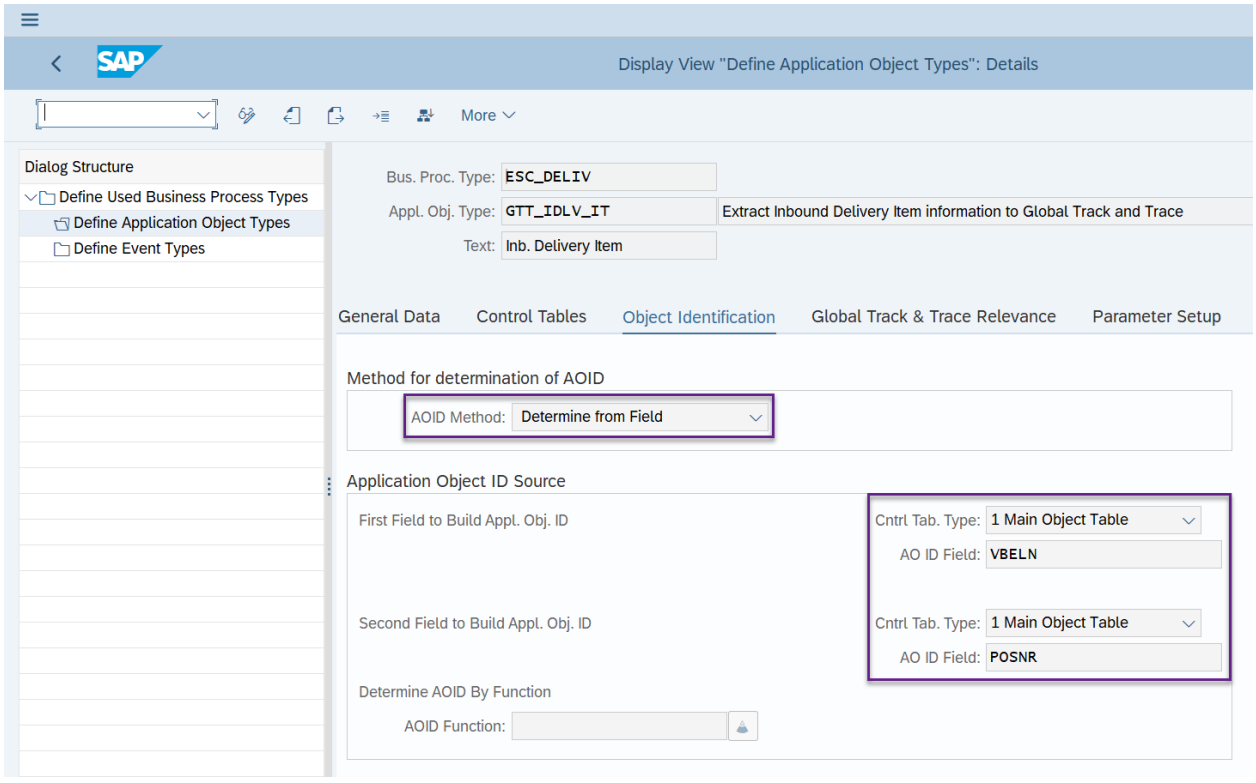
4.9.4 Fill in the information required in the **General Data** tab. **CI for GTT** is the CI Tenant you created in 4.5. Check **GTT Relevant.**



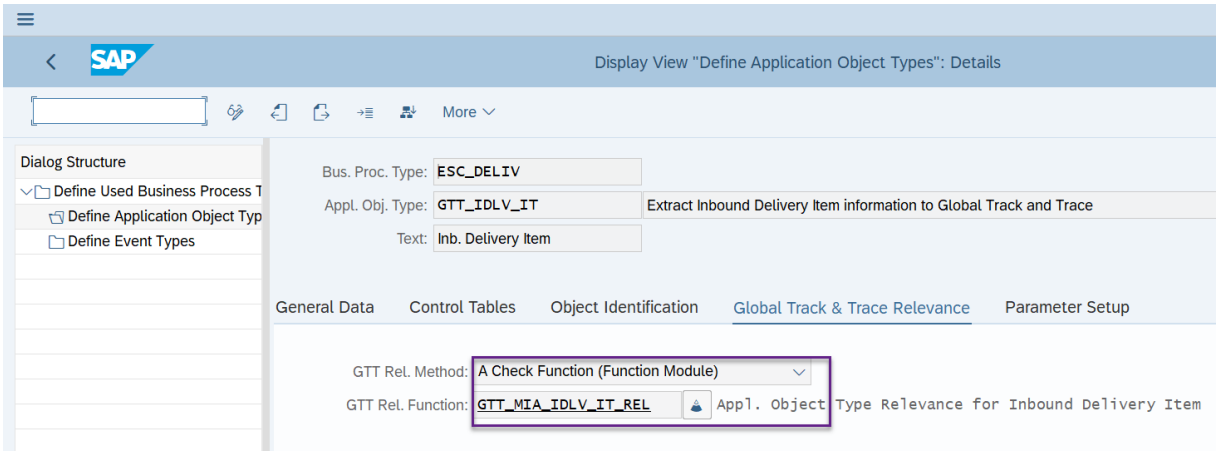
4.9.5 Fill in the **Main Object table** and **Master Table** in the **Control Tables** tab.



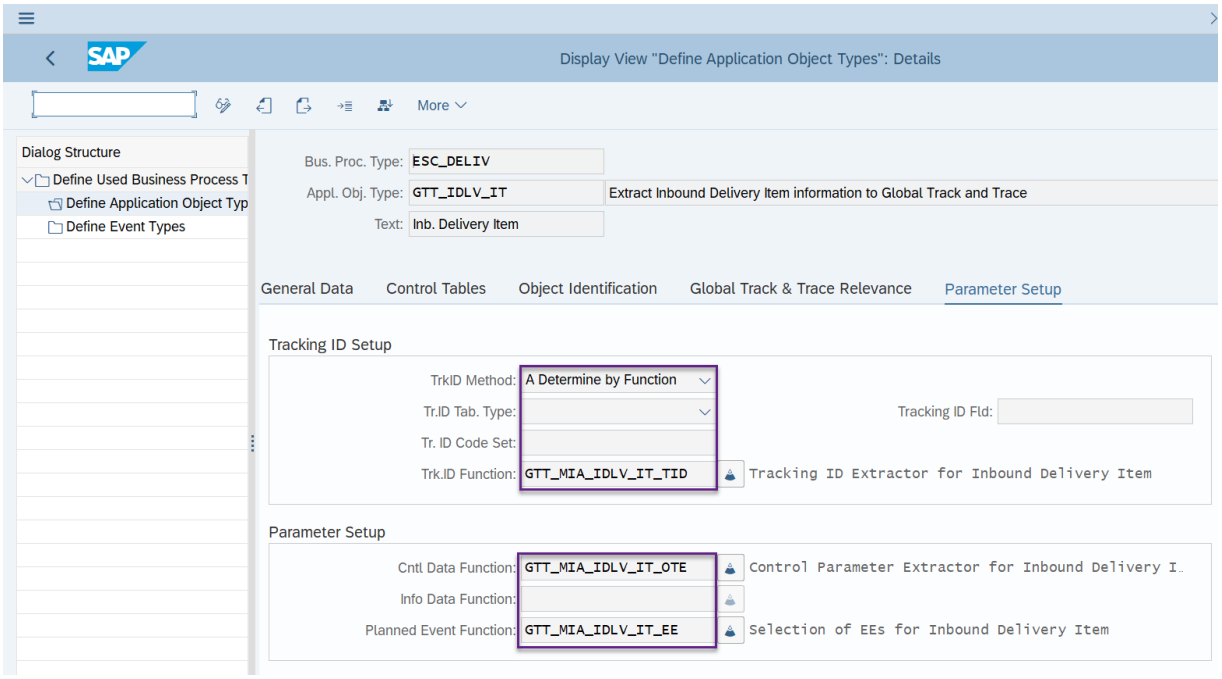
4.9.6 Fill in the **AOID method** in the **Object Identification** tab.



4.9.7 In the **Global Track & Trace Relevance** tab, choose the **GTT Relevance Method** you need.

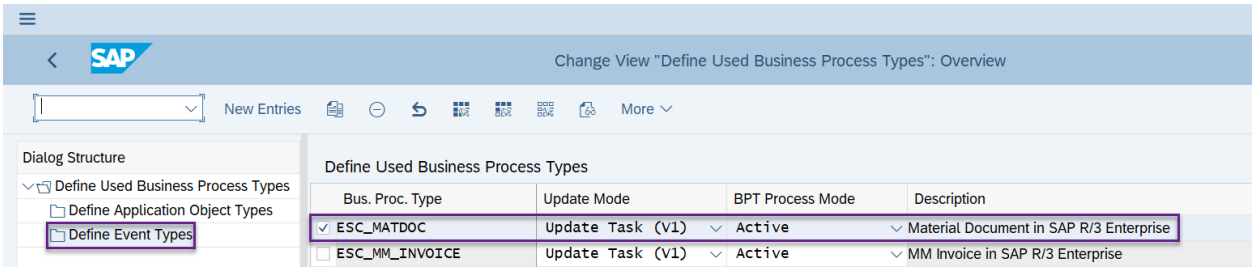


4.9.8 In the **Parameter Setup** tab, choose the **TrkID Method** as you need.

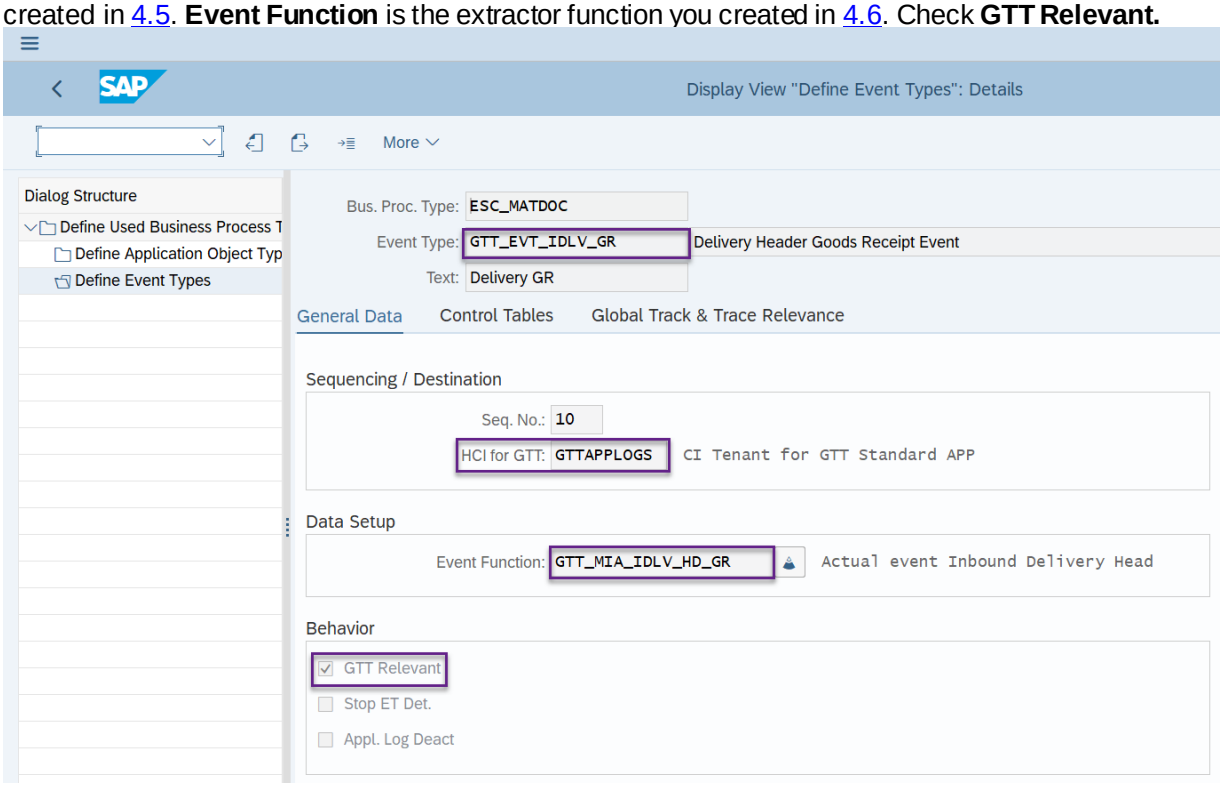


4.10 Define Event Types for Header Level Extractor

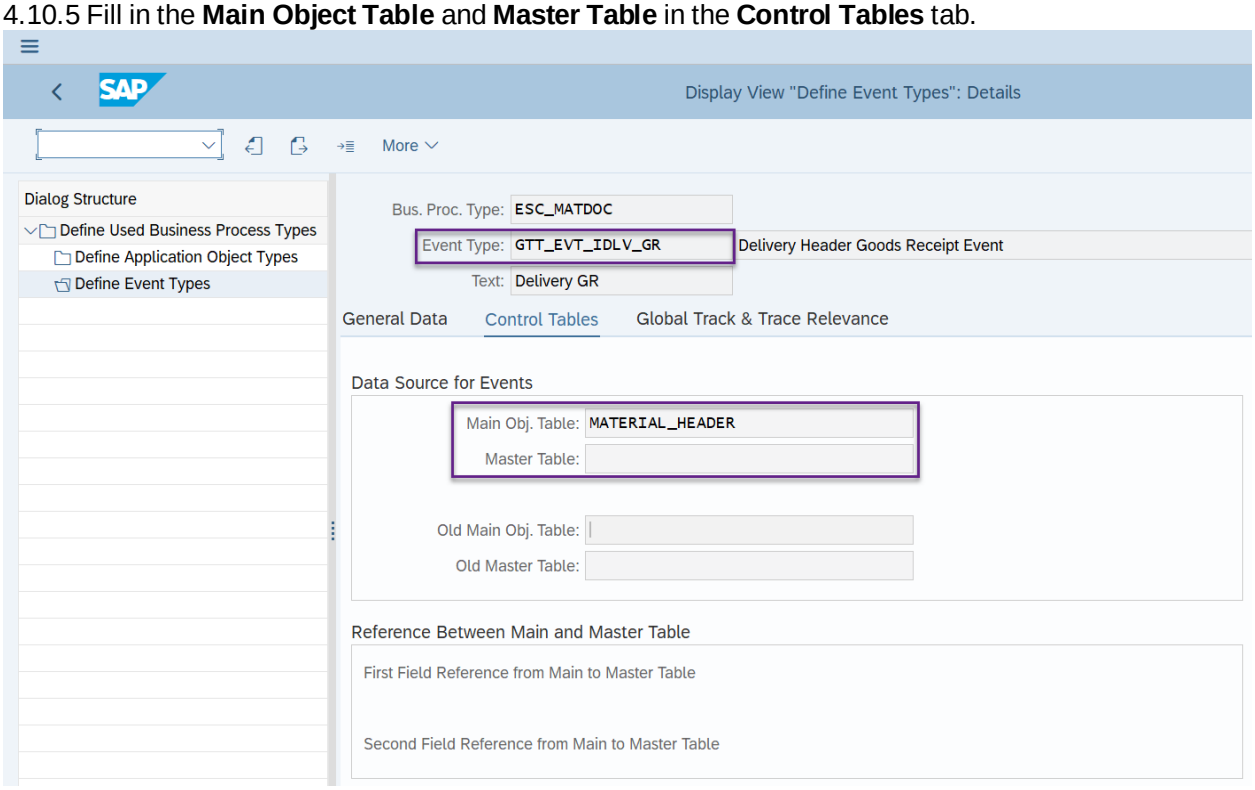
4.10.1 As an example of event's header level tracking introduction, choose the business process type ESC_MATDOC from the **Define Used Business Process Types** on the right side. Double click **Define Event Types.**



4.10.2 Click **New Entries** to create a new event type.
4.10.3 Fill in the **Event Type** and **Text** fields.
4.10.4 Fill in the information required in the **General Data** tab. **HCI for GTT** is the CI Tenant you created in 4.5. **Event Function** is the extractor function you created in 4.6. Check **GTT Relevant.**



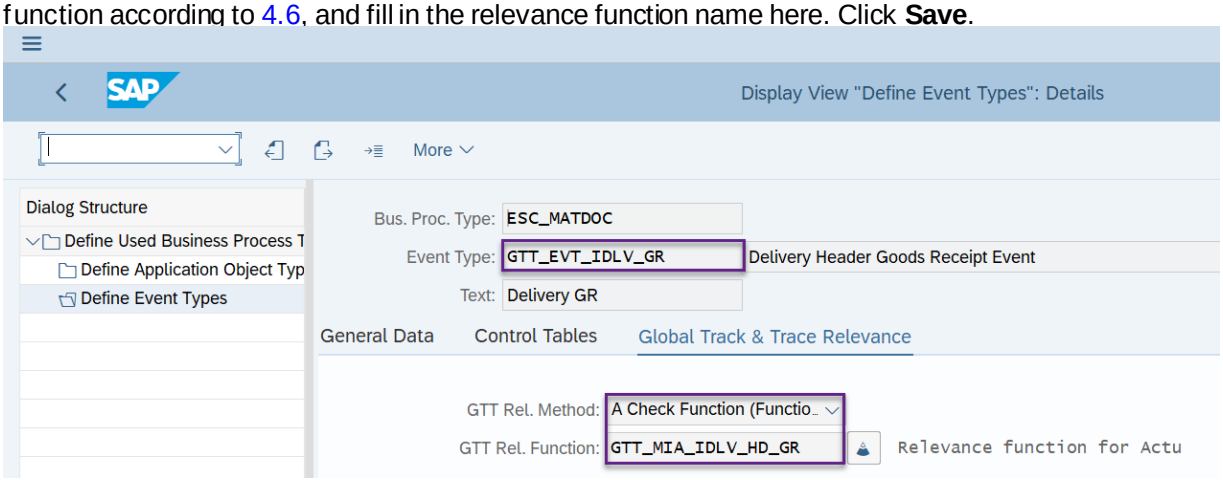
4.10.5 Fill in the **Main Object Table** and **Master Table** in the **Control Tables** tab.



Caution:
If the event type or application object type is on the header level, then you only need to assign the **Main Object Table**.

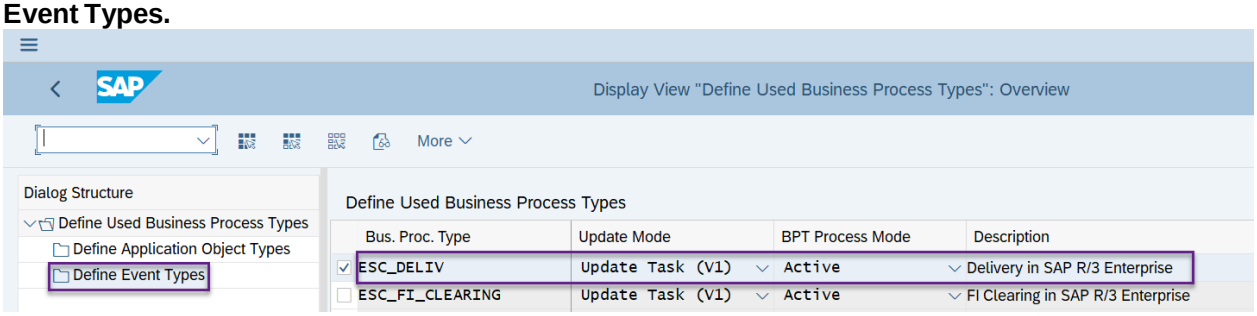
If the event type or application object type is on the item level, then you need to assign the **Main Object Table** and **Master Table**, and assign the reference between the **Main Object Table** and **Master Table**.

4.10.6 In the **Global Track & Trace Relevance** tab, choose the **GTT Relevance Method** you need. If you choose the **GTT Relevance Method** as *Check Function*, then you need to define a relevance function according to 4.6, and fill in the relevance function name here. Click **Save**.

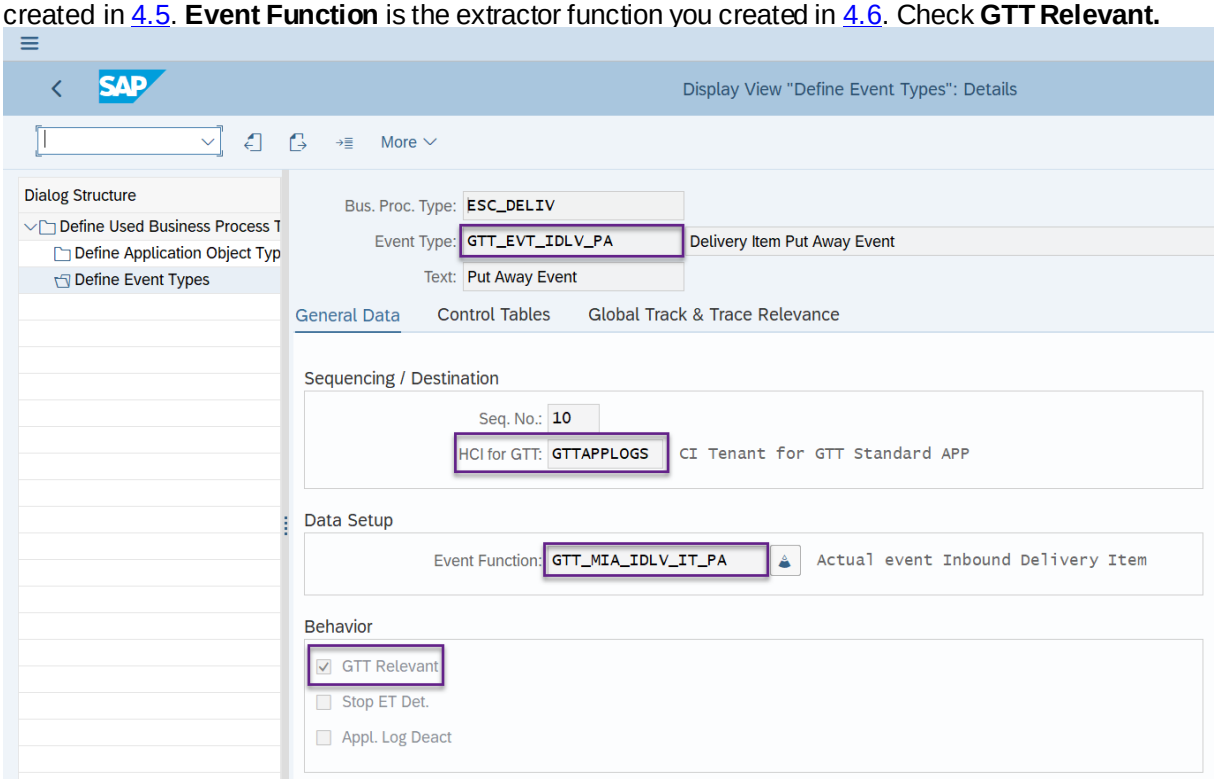


4.11 Define Event Types for Item Level Extractor

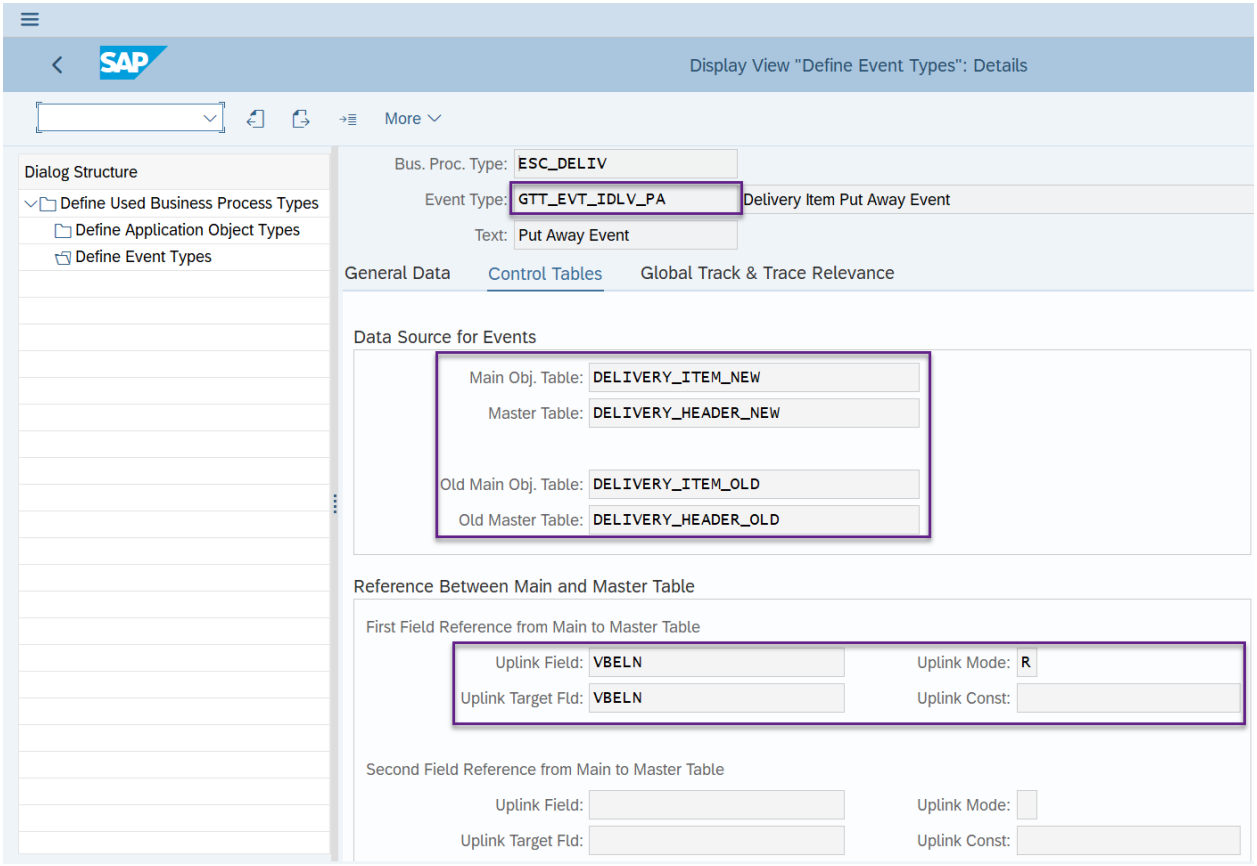
4.11.1 As an example of the event's item level tracking introduction, choose the business process type ESC_DELIV from the **Define Used Business Process Types** on the right side. Double click **Define Event Types.**



4.11.2 Click **New Entries** to create a new event type.
4.11.3 Fill in the **Event Type** and **Text** fields.
4.11.4 Fill in the information required in the **General Data** tab. **HCI for GTT** is the CI Tenant you created in 4.5. **Event Function** is the extractor function you created in 4.6. Check **GTT Relevant.**



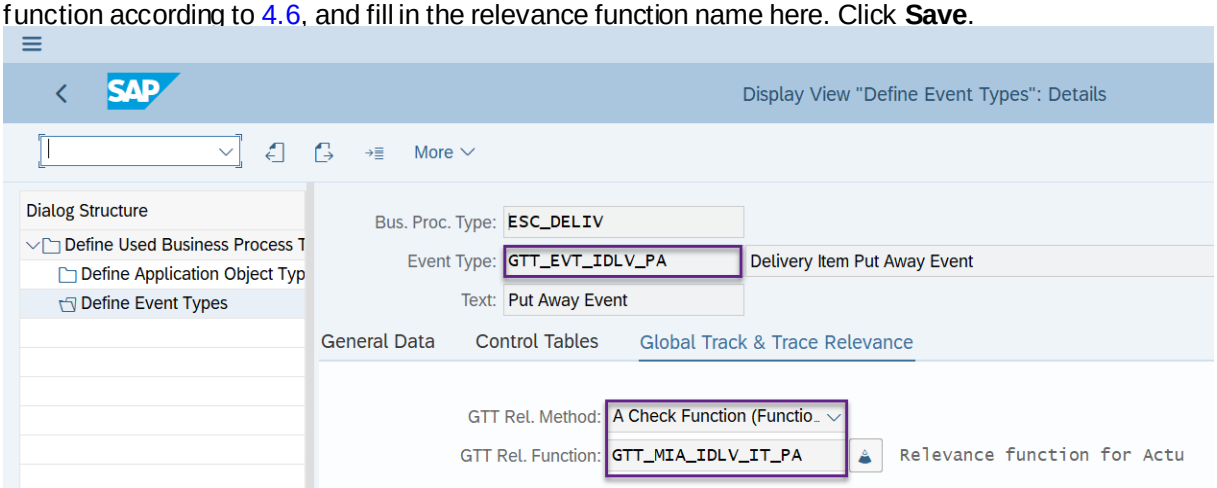
4.11.5 Fill in the **Main Object Table** and **Master Table** in the **Control Tables** tab.



Caution:
If the event type or application object type is on the header level, then you only need to assign the **Main Object Table**.

If the event type or application object type is on the item level, then you need to assign the **Main Object Table** and **Master Table**, and assign the reference between the **Main Object Table** and **Master Table**.

4.11.6 In the **Global Track & Trace Relevance** tab, choose the **GTT Relevance Method** you need. If you choose the **GTT Relevance Method** as *Check Function*, then you need to define a relevance function according to 4.6, and fill in the relevance function name here. Click **Save**.



4.12 Inbound Delivery Extractor Configuration

4.12.1 Define Application Object Types for Inbound Delivery Header

Segment	Field	Value
Header	Bus. Proc. Type	ESC_DELIV
	Appl. Obj. Type	GTT_IDLV_HD
	Description	Extract Inbound Delivery Header information to Global Track and Trace
	Text	Inb. Delivery Header
General Data	Seq. No.	10
	CI for GTT	GTTAPPLOGS
	Object Type	BUS2015
	GTT Relevant	X
Control Tables	Main Obj. Table	DELIVERY_HEADER_NEW
	Del. Obj. Table	DELIVERY_HEADER_OLD
Object Identification	AOID Method	Determine by Function
Object Identification – Application Object ID Source – First Field to Build Appl. Obj. ID	~~Cntrl Tab. Type~~	~~Main Object Table~~
	~~AO ID Field~~	~~VBELN~~
Object Identification – Application Object ID Source – Determine AOID by Function	AOID Extractor	GTT_MIA_IDLV_HD_AOID
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_IDLV_HD_REL
Parameter Setup	TrkID Method	Determine by Function
	~~Tr. ID Tab. Type~~	~~Main Object Table~~
	~~Tracking ID Fld~~	~~VBELN~~
	~~Tr. ID Code Set~~	~~FT1_IN_DELIVERY~~
	Tr.ID Extractor	GTT_MIA_IDLV_HD_TID
	Ctrl Data Function	GTT_MIA_IDLV_HD_OTE
	Planned Event Function	GTT_MIA_IDLV_HD_EE

4.12.2 Define Application Object Types for Inbound Delivery Item

Segment	Field	Value
Header	Bus. Proc. Type	ESC_DELIV
	Appl. Obj. Type	GTT_IDLV_IT
	Description	Extract Inbound Delivery Item information to Global Track and Trace
	Text	Inb. Delivery Item
General Data	Seq. No.	10
	CI for GTT	GTTAPPLOGS
	Object Type	BUS2015
	GTT Relevant	X
Control Tables	Main Obj. Table	DELIVERY_ITEM_NEW
	Master Table	DELIVERY_HEADER_NEW
	Del. Obj. Table	DELIVERY_ITEM_OLD
Control Tables – Reference Between Main and Master Table – First Field Reference from Main to Master Table	Uplink Field	VBELN
	Uplink Mode	R
	Uplink Target Fld	VBELN
Object Identification	AOID Method	Determine by Function
Object Identification – Application Object ID Source – First Field to Build Appl. Obj. ID	~~Cntrl Tab. Type~~	~~Main Object Table~~
	~~AO ID Field~~	~~VBELN~~
Object Identification – Application Object ID Source – Determine AOID by Function	AOID Extractor	GTT_MIA_IDLV_IT_AOID
Object Identification – Application Object ID Source – Second Field to Build Appl. Obj. ID	Cntrl Tab. Type	Main Object Table
	AO ID Field	POSNR
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_IDLV_IT_REL
Parameter Setup	TrkID Method	Determine by Function
	Trk. ID Function	GTT_MIA_IDLV_IT_TID
	Ctrl Data Function	GTT_MIA_IDLV_IT_OTE
	Planned Event Function	GTT_MIA_IDLV_IT_EE

4.12.3 Define Event Types for Inbound Delivery Header

Segment	Field	Value
Header	Bus. Proc. Type	ESC_MATDOC
	Event Type	GTT_EVT_IDLV_GR
	Description	Delivery Header Goods Receipt Event
	Text	Delivery GR
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_IDLV_HD_GR
	GTT Relevant	X
Control Tables	Main Obj. Table	MATERIAL_HEADER
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_IDLV_HD_GR

4.12.4 Define Event Types for Inbound Delivery Item

Segment	Field	Value
Header	Bus. Proc. Type	ESC_DELIV
	Event Type	GTT_EVT_IDLV_PA
	Description	Delivery Item Put Away Event
	Text	Put Away Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_IDLV_IT_PA
	GTT Relevant	X
Control Tables	Main Obj. Table	DELIVERY_ITEM_NEW
	Master Table	DELIVERY_HEADER_NEW
	Old Main Obj. Table	DELIVERY_ITEM_OLD
	Old Master Table	DELIVERY_HEADER_OLD
Control Tables – Reference Between Main and Master Table – First Field Reference from Main to Master Table	Uplink Field	VBELN
	Uplink Mode	R
	Uplink Target Fld	VBELN
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_IDLV_IT_PA

Segment	Field	Value
Header	Bus. Proc. Type	ESC_DELIV
	Event Type	GTT_EVT_IDLV_PACK
	Description	Delivery Item Packing Event
	Text	Delivery Packing
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_IDLV_IT_PKNG
	GTT Relevant	X
Control Tables	Main Obj. Table	DELIVERY_ITEM_NEW
	Master Table	DELIVERY_HEADER_NEW
	Old Main Obj. Table	DELIVERY_ITEM_OLD
	Old Master Table	DELIVERY_HEADER_OLD
Control Tables – Reference Between Main and Master Table – First Field Reference from Main to Master Table	Uplink Field	VBELN
	Uplink Mode	R
	Uplink Target Fld	VBELN
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_IDLV_IT_PKNG

4.12.5 Cross-processes for Inbound Delivery

Prerequisite:

ABAP code and BC set should be activated in the system.

The following entries should be maintained in transaction “ZGTT_AOTYPE_RST - AOT Types Restrictions” for the cross-processes tracking scenario.

Restr.ID	Restr.Pos	Option	Sign	Application Obj.Type
FU_TO_IDLH	001	Equal To	Include	GTT_IDLV_HD
FU_TO_IDLI	001	Equal To	Include	GTT_IDLV_IT
SH_TO_IDLH	001	Equal To	Include	GTT_IDLV_HD
SH_TO_IDLI	001	Equal To	Include	GTT_IDLV_IT

4.13 Shipment Extractor Configuration

4.13.1 Define Application Object Types for Shipment Header

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Appl. Obj. Type	GTT_SHP_HD
	Description	Extract Shipment Header information to Global Track and Trace
	Text	Shipment Header
General Data	Seq. No.	10
	CI for GTT	GTTAPPLOGS
	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Del. Obj. Table	SHIPMENT_HEADER_OLD
Object Identification	AOID Method	Determine by Function
Object Identification – Application Object ID Source – First Field to Build Appl. Obj. ID	Cntrl Tab. Type	~~Main Object Table~~
	AO ID Field	~~TKNUM~~
Object Identification – Application Object ID Source – Determine AOID by Function	AOID Extractor	GTT_MIA_SHP_HD_AOID
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_REL
Parameter Setup	TrkID Method	Determine by Function
	Trk. ID Function	GTT_MIA_SHP_HD_TID
	Ctrl Data Function	GTT_MIA_SHP_HD_OTE
	Planned Event Function	GTT_MIA_SHP_HD_EE

4.13.2 Define Event Types for Shipment Header

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Event Type	GTT_EVT_SHP_ARRIVE
	Description	Shipment Header Arrival Event
	Text	Arrival Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_SHP_HD_ARR
	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Old Main Obj. Table	SHIPMENT_HEADER_OLD
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_ARR

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Event Type	GTT_EVT_SHP_CHECKIN
	Description	Shipment Header Check In Event
	Text	Check In Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_SHP_HD_CI
	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Old Main Obj. Table	SHIPMENT_HEADER_OLD
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_CI

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Event Type	GTT_EVT_SHP_DEPART
	Description	Shipment Header Departure Event
	Text	Departure Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_SHP_HD_DEP
	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Old Main Obj. Table	SHIPMENT_HEADER_OLD
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_DEP

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Event Type	GTT_EVT_SHP_LOADEND
	Description	Shipment Header Load End Event
	Text	Departure Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_SHP_HD_LE

	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Old Main Obj. Table	SHIPMENT_HEADER_OLD
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_LE

Segment	Field	Value
Header	Bus. Proc. Type	ESC_SHIPMT
	Event Type	GTT_EVT_SHP_LOADSTAR
	Description	Shipment Header Load Start Event
	Text	Load Start Event
General Data	Seq. No.	10
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_MIA_SHP_HD_LS
	GTT Relevant	X
Control Tables	Main Obj. Table	SHIPMENT_HEADER_NEW
	Old Main Obj. Table	SHIPMENT_HEADER_OLD
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_MIA_SHP_HD_LS

4.14 Freight Unit Extractor Configuration

4.14.1 Define Application Object Types for Freight Unit Header

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Appl. Obj. Type	GTT_FU
	Description	Extract FU Information to Global Track and Trace
	Text	FU Header
General Data	Seq. No.	10
	CI for GTT	GTTAPPLOGS
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
	Del. Obj. Table	TOR_ROOT
Object Identification	AOID Method	Determine by Function
Object Identification – Application Object ID Source – Determine AOID By Function	~~Cntl Tab. Type~~	~~Main Object Table~~
	AOID Function	GTT_STS_AOID_TOR
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)

	GTT Rel. Function	GTT_TS_FU_HD_REL
Parameter Setup	Trk.ID Method	Determine by Function
	Tr. Function	GTT_TS_FU_HD_TID
	Ctrl Data Function	GTT_TS_FU_HD_OTE
	Planned Event Function	GTT_TS_FU_HD_EE

4.14.2 Define Event Types for Freight Unit Header

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_ARRIVE
	Description	FO/FB/FU Arrival Event
	Text	Arrival Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_ARRIVAL
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_ARRIVE

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_COUPLE
	Description	FO/FB/FU Coupling Event
	Text	Coupling Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_COUPLING
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_COUP

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DECOUPLE
	Description	FO/FB/FU Decoupling Event
	Text	Decoupling Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DECOUPL
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DECP

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_UNLSTART
	Description	FO/FB/FU Unloading Start Event
	Text	Unloading Start
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_UNLD_STR
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_USTR

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DELAY
	Description	FO/FB/FU Delay Event
	Text	Delay Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DELAY
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT

Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DELAY

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DEPART
	Description	FO/FB/FU Departure Event
	Text	Departure Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DEPART
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DEPART

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_FU_DELAY
	Description	FU Delay Event
	Text	FU Delay Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_FU_DELAY
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_FU_DELAY

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_LOADEND
	Description	FO/FB/FU Loading End Event
	Text	Loading End Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_LOAD_END

	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_LEND

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_LOADSTRT
	Description	FO/FB/FU Loading Start Event
	Text	Loading Start Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_LOAD_STR
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_LSTR

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_POD
	Description	FO/FB/FU Proof of Delivery Event
	Text	POD Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_POD
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_POD

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_POPU
	Description	FO/FB/FU Proof of Pickup Event
	Text	POPU Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_POPU
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_POPU

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_UNLEND
	Description	FO/FB/FU Unloading End Event
	Text	Unloading End Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_UNLD_END
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_UEND

4.15 Road Freight Order/Ocean/Air Booking Extractor Configuration

4.15.1 Define Application Object Types for Road Freight Order/Ocean/Air Booking Header

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Appl. Obj. Type	GTT_SHP _HD
	Description	Extract FO/FB information to Global Track and Trace
	Text	FO/FB Header
General Data	Seq. No.	10
	CI for GTT	GTTAPPLOGS
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
	Del. Obj. Table	TOR_ROOT
Object Identification	AOID Method	Determine by Function
Object Identification – Application Object ID Source – Determine AOID By Function	~~Cntl Tab. Type~~	~~Main Object Table~~
	AOID Function	GTT_STS_AOID_TOR
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_FO_HD_REL
Parameter Setup	Trk.ID Method	Determine by Function
	Tr. Function	GTT_TS_FO_HD_TID
	Ctrl Data Function	GTT_TS_FO_HD_OTE
	Planned Event Function	GTT_TS_FO_HD_EE

4.15.2 Define Event Types for Road Freight Order/Ocean/Air Booking Header

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_ARRIVE
	Description	FO/FB/FU Arrival Event
	Text	Arrival Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_ARRIVAL
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_ARRIVE

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_COUPLE
	Description	FO/FB/FU Coupling Event
	Text	Coupling Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_COUPLING
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_COUP

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DECOUPLE
	Description	FO/FB/FU Decoupling Event
	Text	Decoupling Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DECOUPL
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DECP

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_UNLSTART
	Description	FO/FB/FU Unloading Start Event
	Text	Unloading Start
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_UNLD_STR
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT

Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_USTR

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DELAY
	Description	FO/FB/FU Delay Event
	Text	Delay Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DELAY
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DELAY

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_DEPART
	Description	FO/FB/FU Departure Event
	Text	Departure Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_DEPART
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_DEPART

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_LOADEND
	Description	FO/FB/FU Loading End Event
	Text	Loading End Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_LOAD_END

	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_LEND

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_LOADSTRT
	Description	FO/FB/FU Loading Start Event
	Text	Loading Start Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_LOAD_STR
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_LSTR

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_POD
	Description	FO/FB/FU Proof of Delivery Event
	Text	POD Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_POD
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_POD

Segment	Field	Value
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_POPU
	Description	FO/FB/FU Proof of Pickup Event
	Text	POPU Event
General Data	Seq. No.	0

	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_POPU
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_POPU

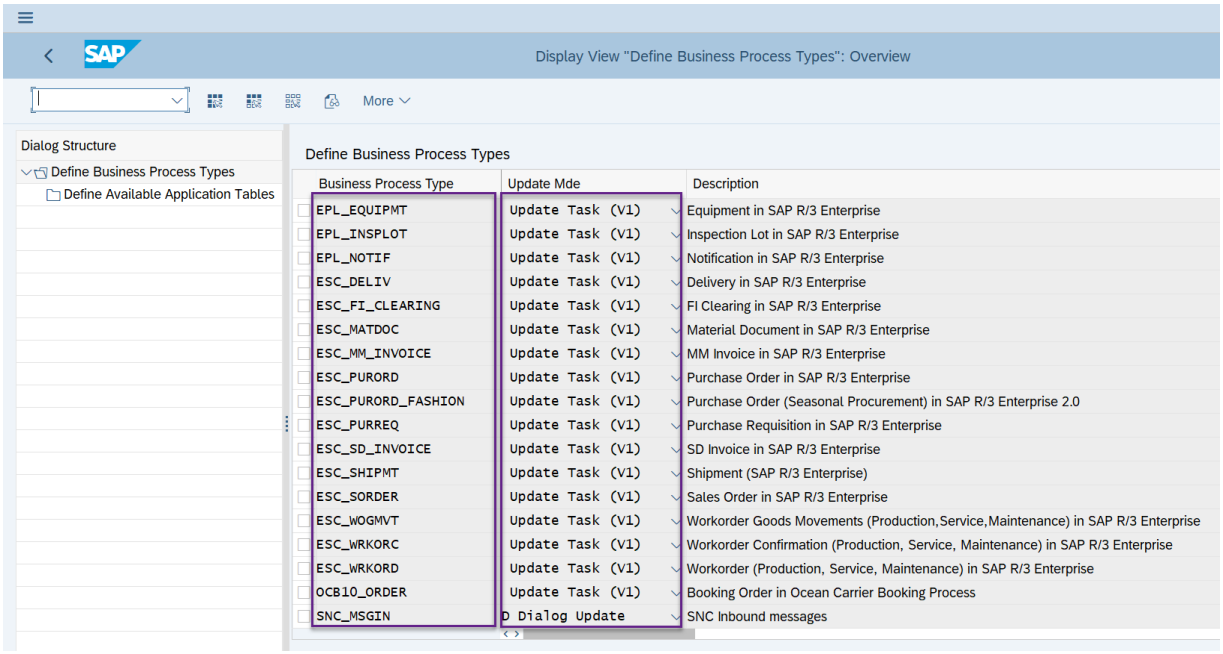
Segment	**Field**	**Value**
Header	Bus. Proc. Type	TMS_TOR
	Event Type	GTT_EVT_TOR_UNLEND
	Description	FO/FB/FU Unloading End Event
	Text	Unloading End Event
General Data	Seq. No.	0
	HCI for GTT	GTTAPPLOGS
	Event Function	GTT_TS_TOR_UNLD_END
	GTT Relevant	X
Control Tables	Main Obj. Table	TOR_ROOT
Global Track & Trace Relevance	GTT Rel. Method	Check Function (Function Module)
	GTT Rel. Function	GTT_TS_TOR_UEND

5. Configuration and Coding Guide - Advanced

5.1 Available Contexts for the Extractors' Modules

5.1.1 In **Display IMG** page, click **Integration with Other SAP Components -> Interface to Global Track and Trace -> Define Application Interface.**
Choose activity **Define Business Process Types**

5.1.2 Select the **Business Process Types** to find all the context tables and their structure info.

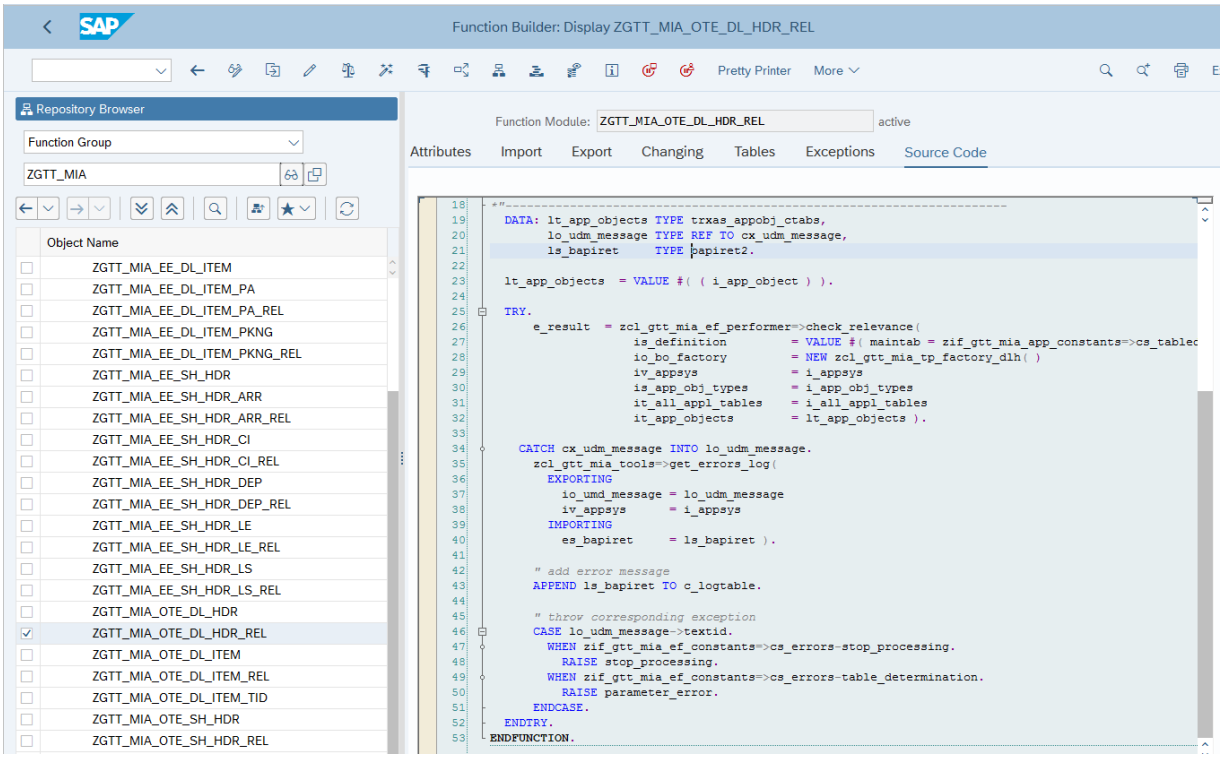


5.2 Coding Tips in the GTT Relevance Function Modules

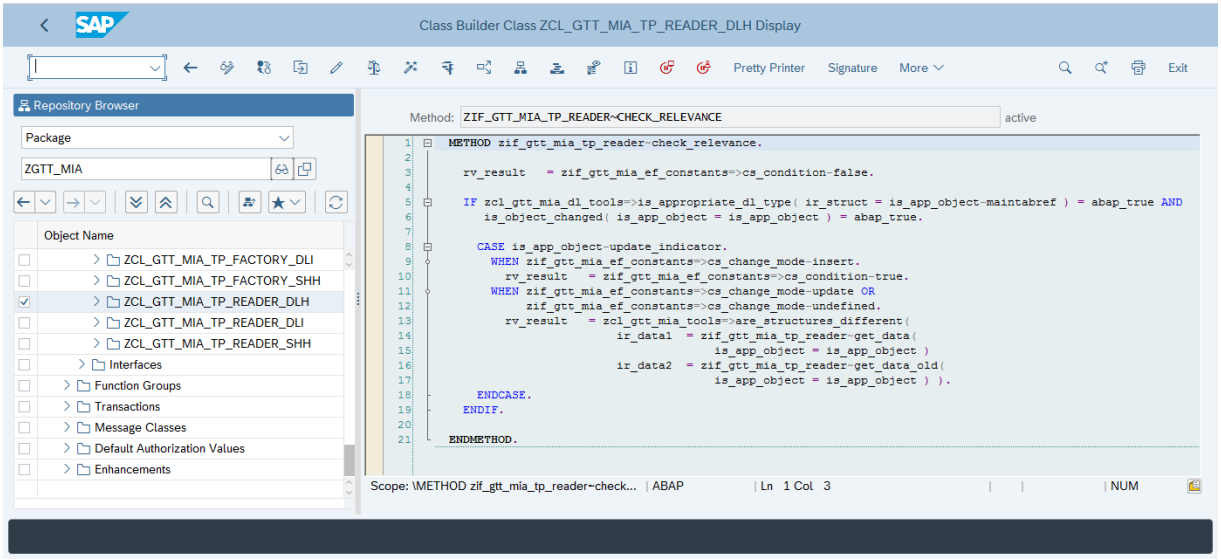
To customize the GTT relevance function modules, key points are as follows:

1. Make sure that the Main / Master tables follow the configuration of corresponding AOT or Event Type.
2. Add customization logics to determine the output parameters E_RESULT.

See the sample code of function: ZGTT_MIA_OTE_DL_HDR_REL.



The function module uses class ZCL_GTT_MIA_TP_READER_DLH to do the check.

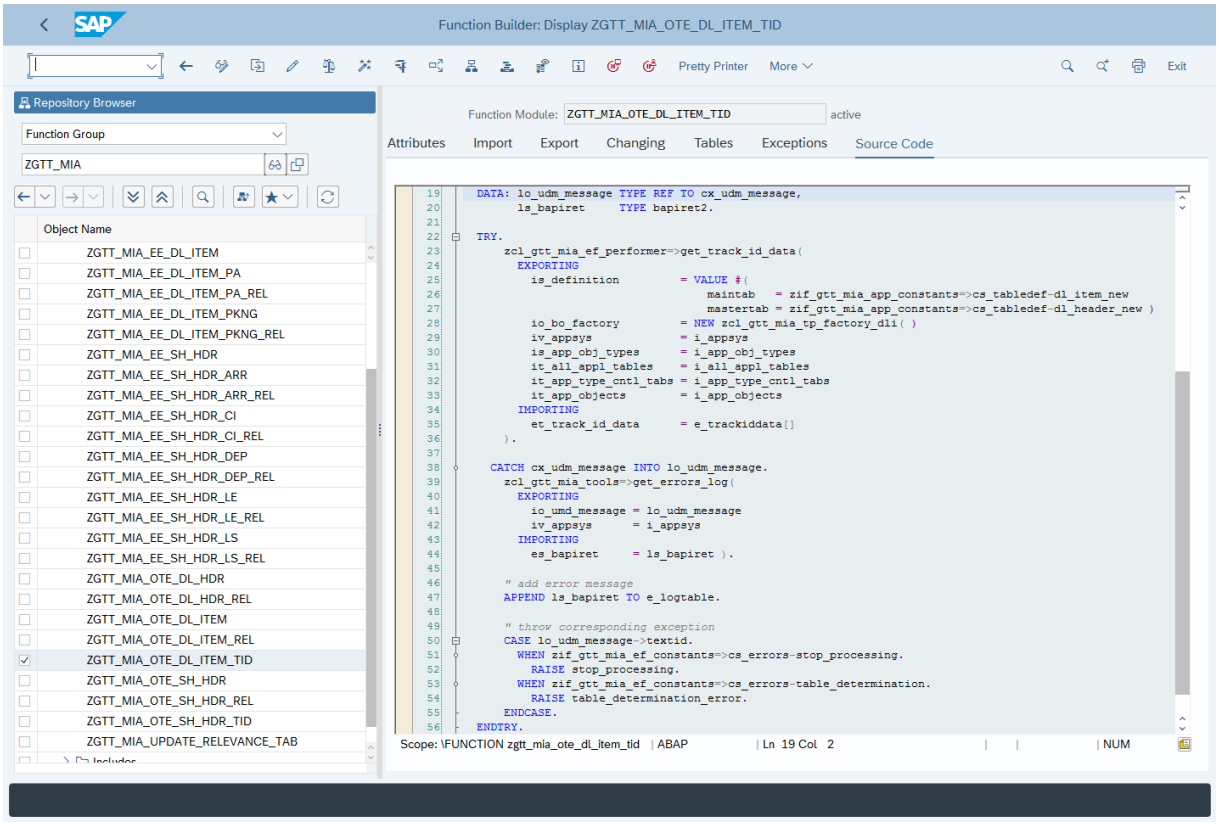


5.3 Coding Tips in the Tracking ID Function Modules

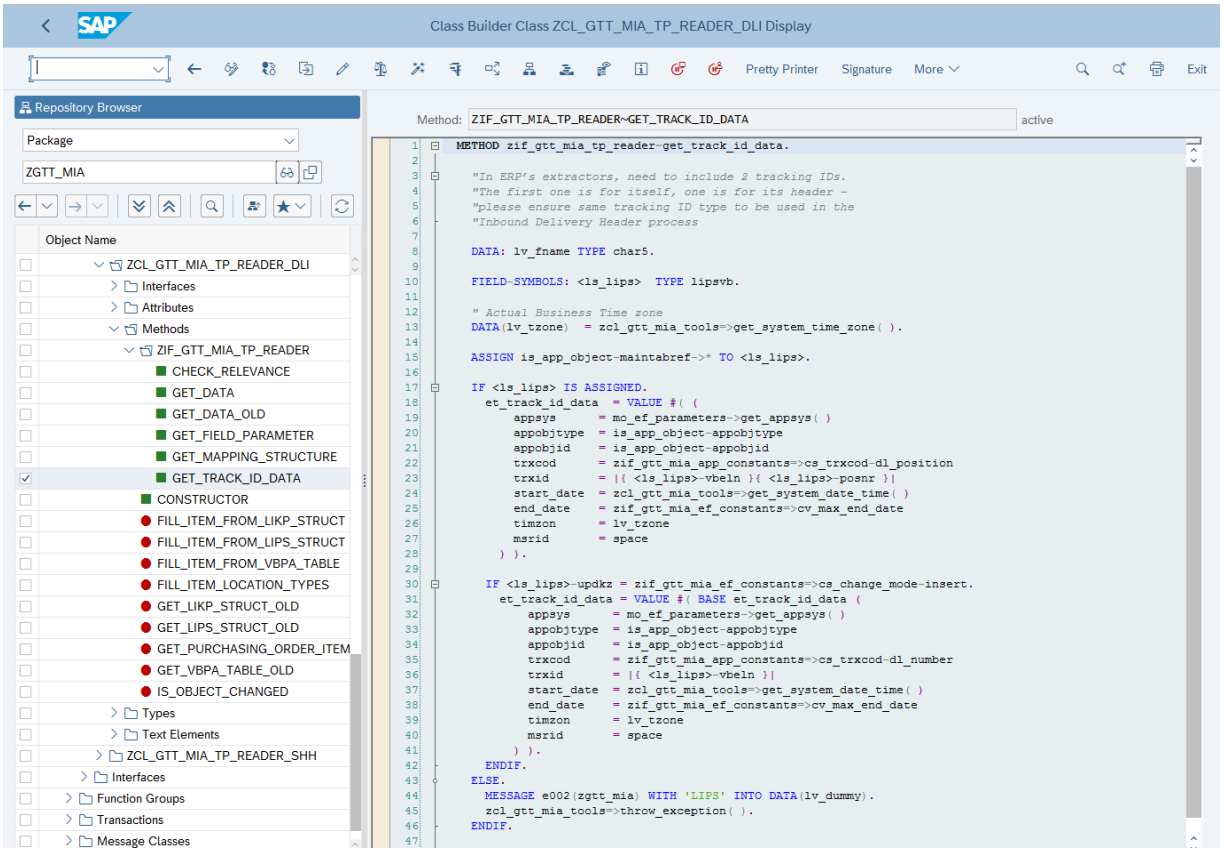
To customize the Tracking ID function modules, key points are as follows:

1. Make sure that the Main / Master tables follow the configuration of corresponding AOT.
2. Add customization logics to fill in the output table E_TRACKIDDATA.
3. The Tracking ID Type needs to be the same as the definition in the process type of model in the *Manage Models* app.
4. GTT V2 accepts delta transport for tracking IDs, which means only the newly-created / changed / deleted tracking IDs shall be filled in, while the ones without changes need to be ignored in the logic.
5. The tracking ID for its own process type needs to be filled in for each process update.
6. In case of tracking ID deletion, the field ACTION shall be filled in with 'D'.

See sample code of function: ZGTT_MIA_OTE_DL_ITEM_TID.



The corrisponding Track ID data is filled by ZCL_GTT_MIA_TP_READER_DLI class:

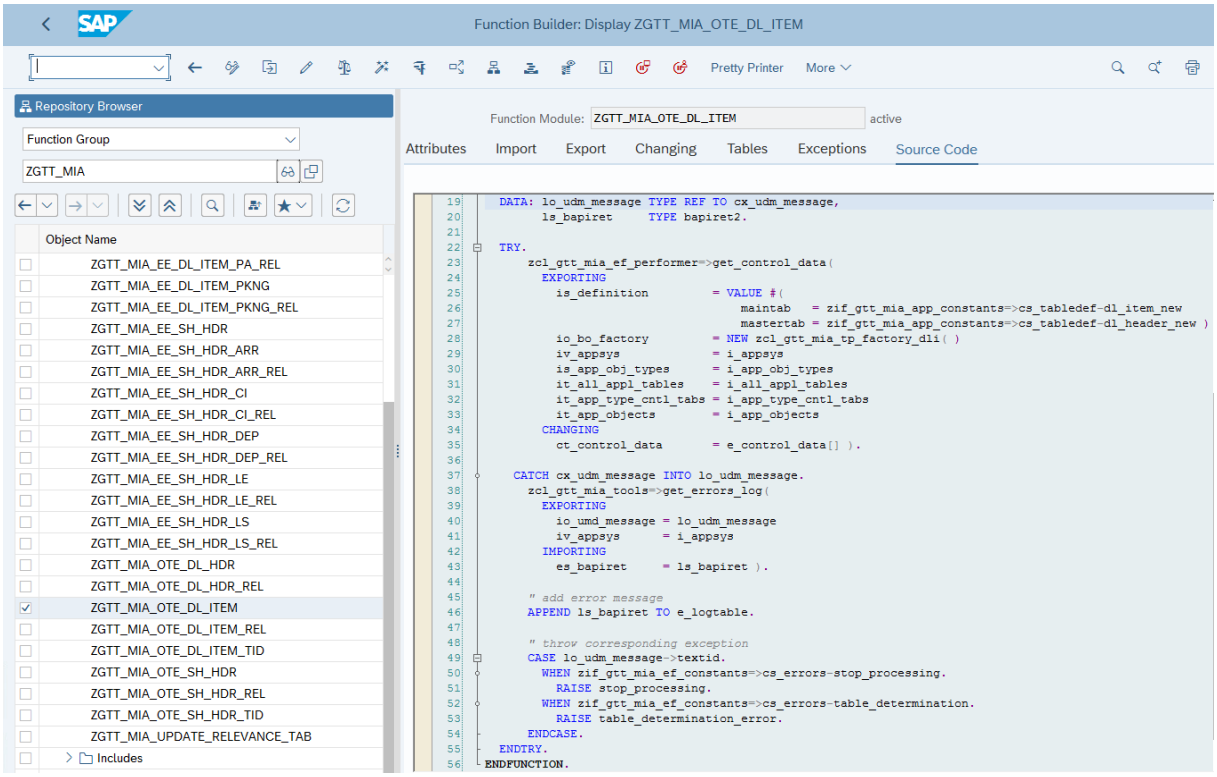


5.4 Coding Tips in the Control Parameter Function Modules

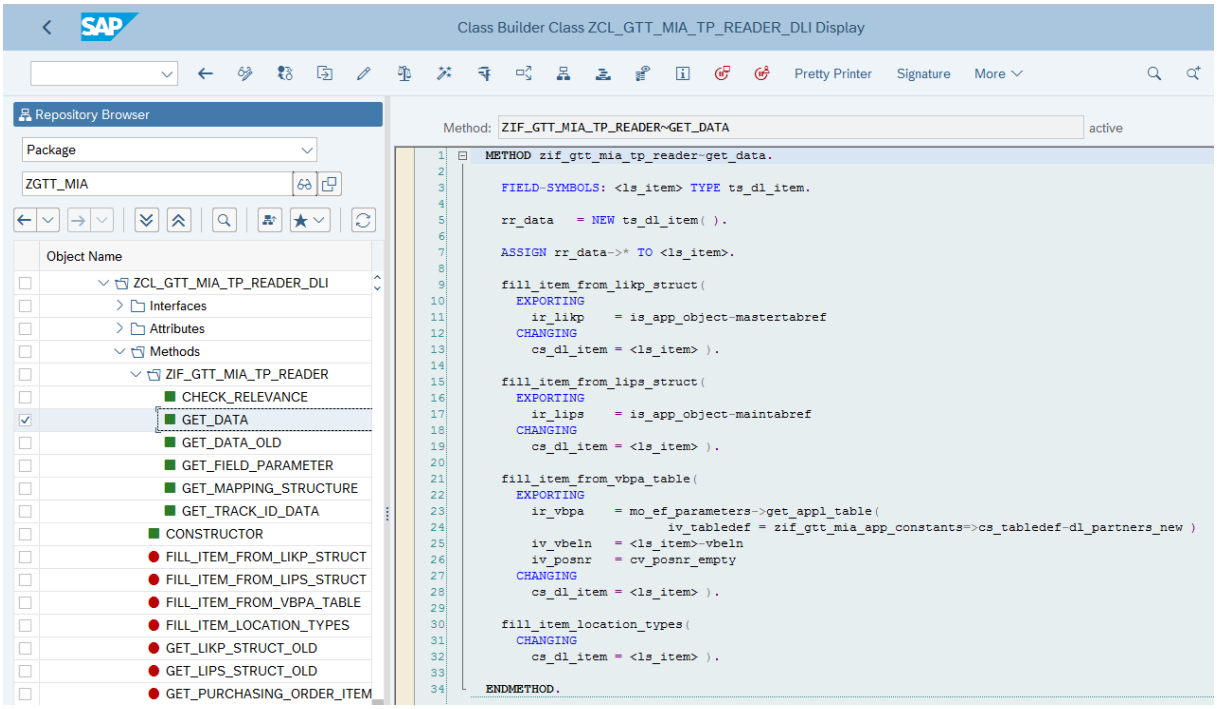
To customize the Control Parameter function modules, key points are as follows:

1. Make sure that the Main / Master tables follow the configuration of corresponding AOT.
2. Add customization logics to fill in the output table E_CONTROL_DATA.
3. GTT V2 asks for full transport for all the control parameters, which means all the fields needs to be extracted in all cases, no matter whether their values have been changed or not.
4. To fill in the composition (table) fields defined in the *Manage Models* app, use the parameter field PARAMINDEX to specify the line number. If the field is empty, GTT regards it as a simple flat field.
5. To clear a composition, fill in the key field using invalid values, for which the key attribute has been checked in the *Manage Models* app. It's not recommended to fill in a code list type field to clear a composition even if it's a key field.
6. The fields with fixed names 'ACTUAL_BUSINESS_DATETIME' and 'ACTUAL_BUSINESS_TIMEZONE' are mandatory fields to be transported for event handling sequencing in GTT Version 2.
7. The fields with fixed names 'ACTUAL_TECHNICAL_TIMEZONE' and 'ACTUAL_TECHNICAL_DATETIME' are optional and recommended for fixing IDOC sequencing issue (after object creation in S/4 actual event might be processed before object creation in GTT via TP request, which leads to an error)
8. In the *Manage Models* app, click the *IDOC Integration* tab to map the parameter names and model field names.
9. For DATE or DATETIME fields, when the source value is initial like '00000000' '000000000000000', then only enable PARAMNAME and PARAMINDEX in the extractor code, and do not enable VALUE for IDOC sending.
10. For amount field which has reference currency, ensure to call BAPI 'BAPI_CURRENCY_CONV_TO_EXTERNAL' using the reference currency to make the amount tracked correctly by GTT Version 2. The BAPI will output the conversion result in 4 decimals as fixed, which needs additional rounding in the extractor if the corresponding field defined in the tracking model is less than 4 decimals.
11. In the shipment extractor, add the prefix LBN# into the fields SERVICE AGENT LBN ID for integration with Visibility Providers.

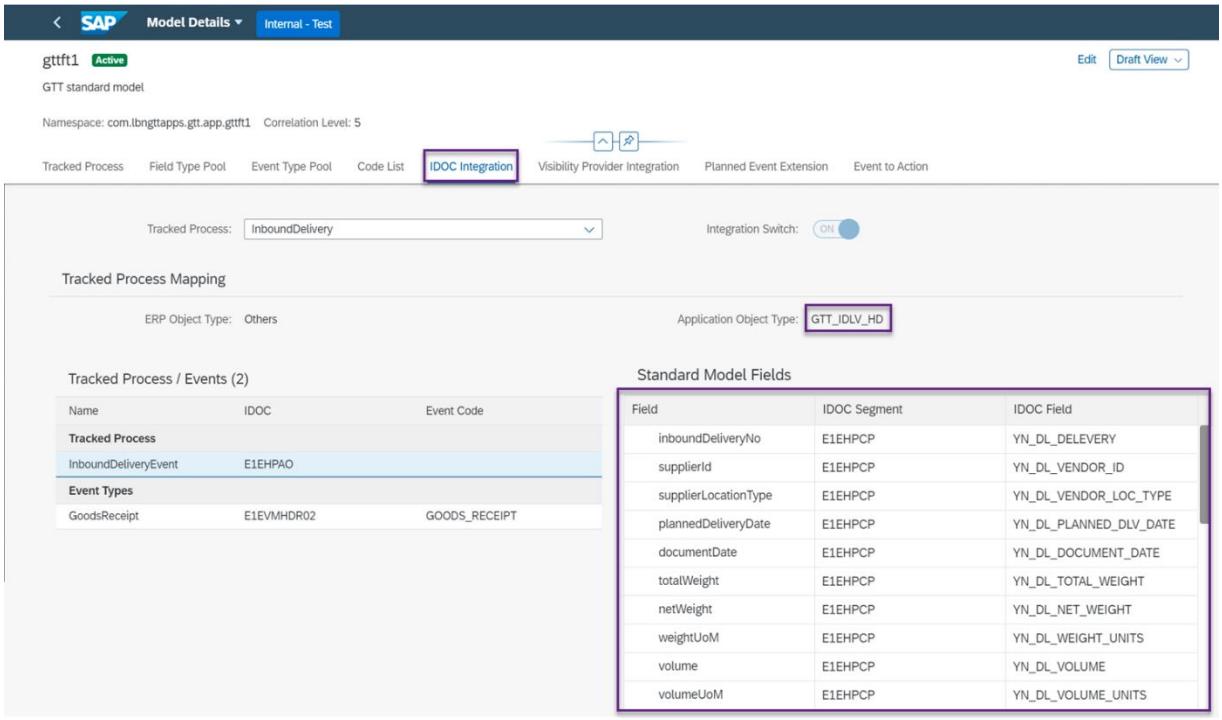
See sample code of function: ZGTT_MIA_OTE_DL_ITEM



Control data is prepared by ZCL_GTT_MIA_TP_READER_DLI class:



Fields mapping is set up in the *Manage Models* app in the *IDOC Integration* section:

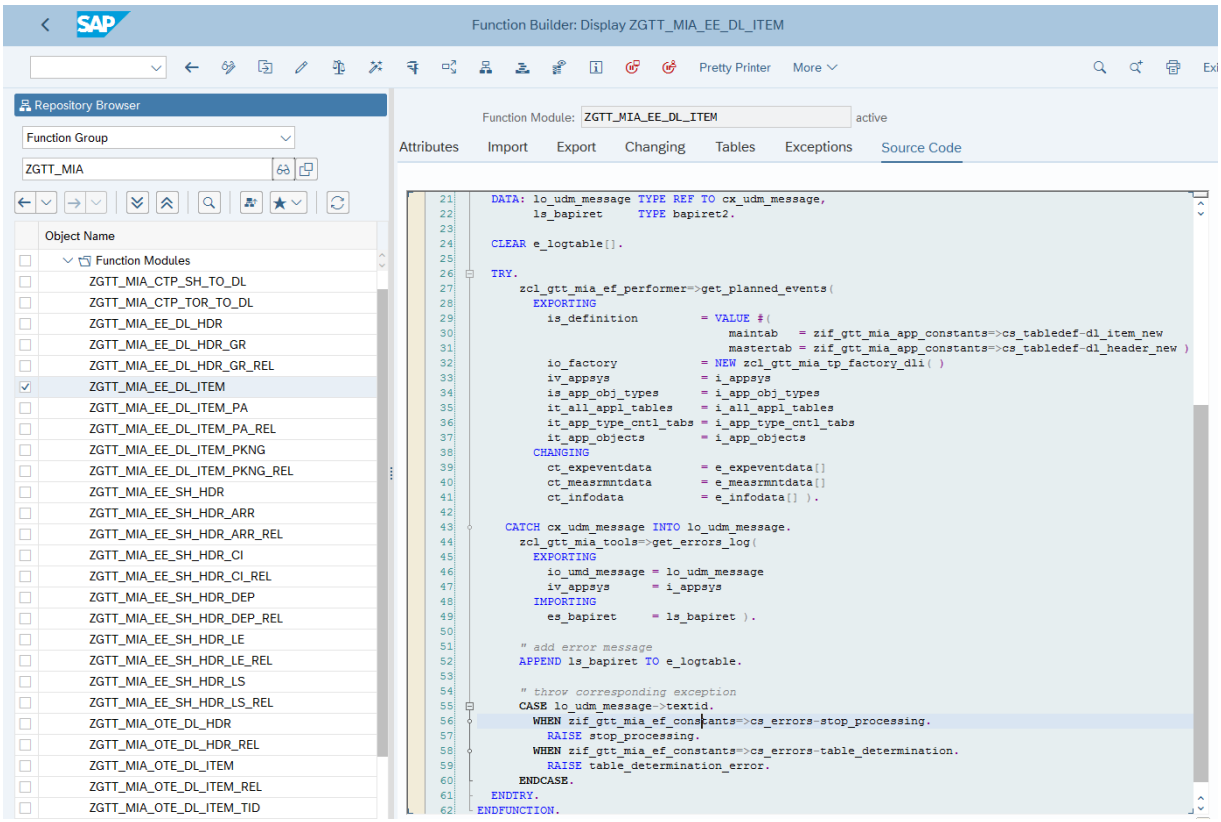


5.5 Coding Tips in the Planned Event Function Modules

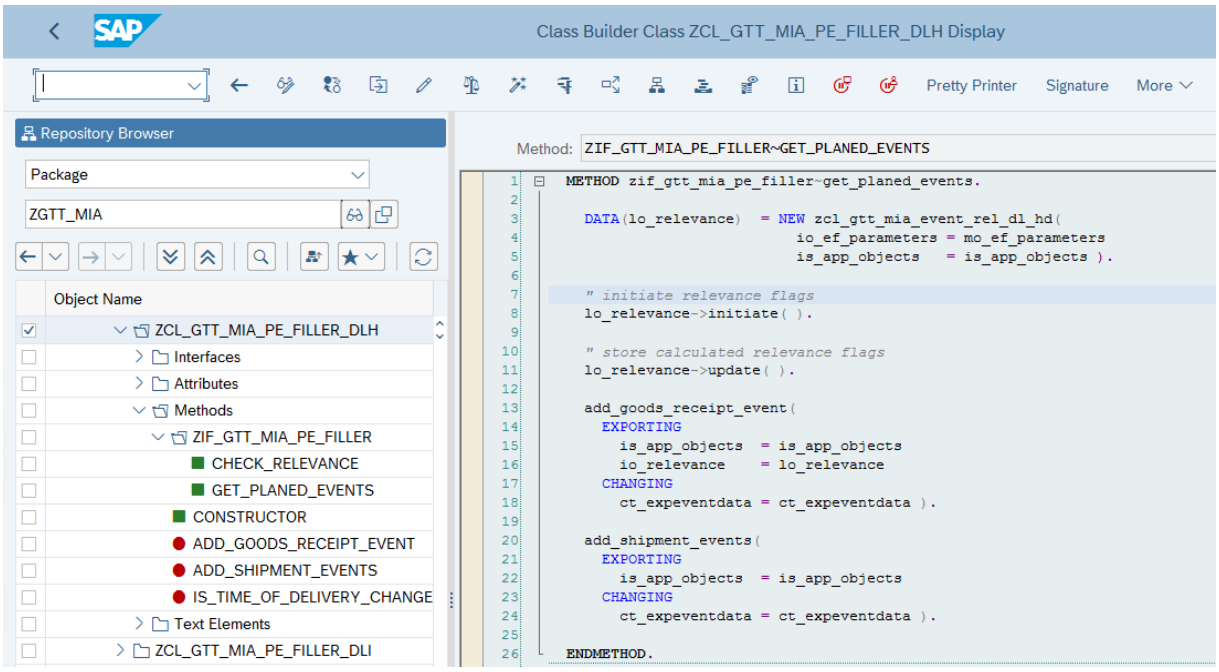
To customize the Planned Event function modules, key points are as follows:

1. Make sure that the Main / Master tables follow the configuration of corresponding AOT.
2. Add customization logics to fill in the output table E_EXPEVENTDATA.
3. By default, except that no changes are made on the model configuration, GTT Version 2 will ask for full transport for all the planned events, which means that all the events needs to be extracted in all cases, no matter whether their values have been changed. If nothing is transported, the planned events will be removed in GTT Version 2.
4. The field MILESTONE is mandatory to be transported.
5. The field EVT_EXP_DATETIME is optional, but needs to be filled in with relevant time zone EVT_EXP_TZONE together if it needs to be transported.
6. The field LOC_ID1 is optional, but needs to be filled in with relevant location type LOCTYPE together if it needs to be transported. The values for field LOCTYPE are limited by the Manage Locations app in GTT Version 2.
7. The field LOCID2 is mandatory to specify event match key of each stop (combination of the Shipment Number and Stop ID) for shipment tracking
8. The field MILESTONENUM is recommended to specify in order to implement custom sorting logic instead of sorting by planned business datetime.

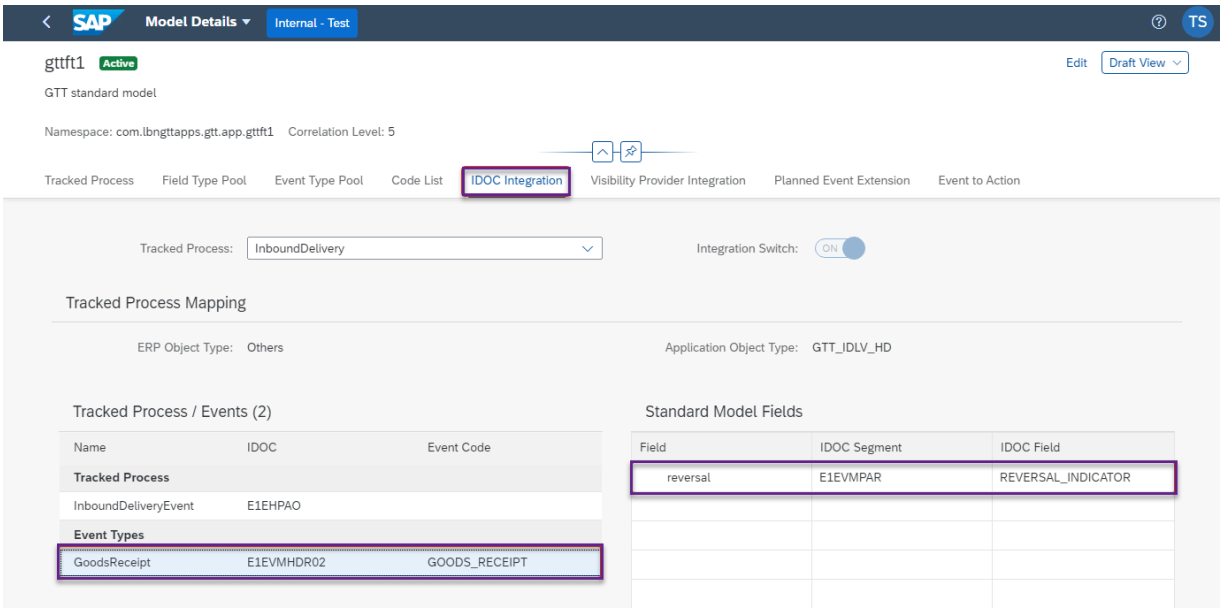
See sample code of function: ZGTT_MIA_EE_DL_ITEM:



Main logic of Inbound Delivery Item is implemented in class ZCL_GTT_MIA_PE_FILLER_DLH:



Event parameters mapping is set up in the *IDOC Integration* tab of the *Manage Models* app:

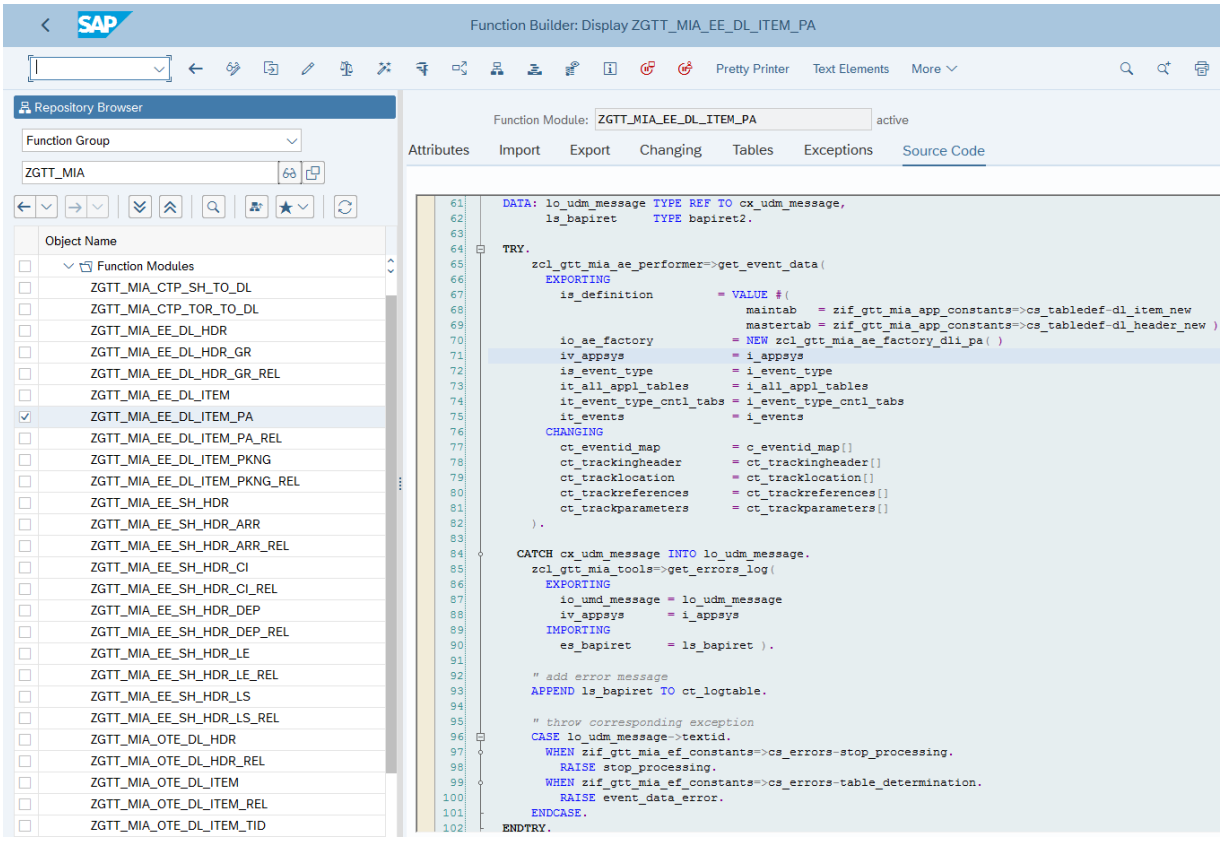


5.6 Coding Tips in the Event Data Function Modules

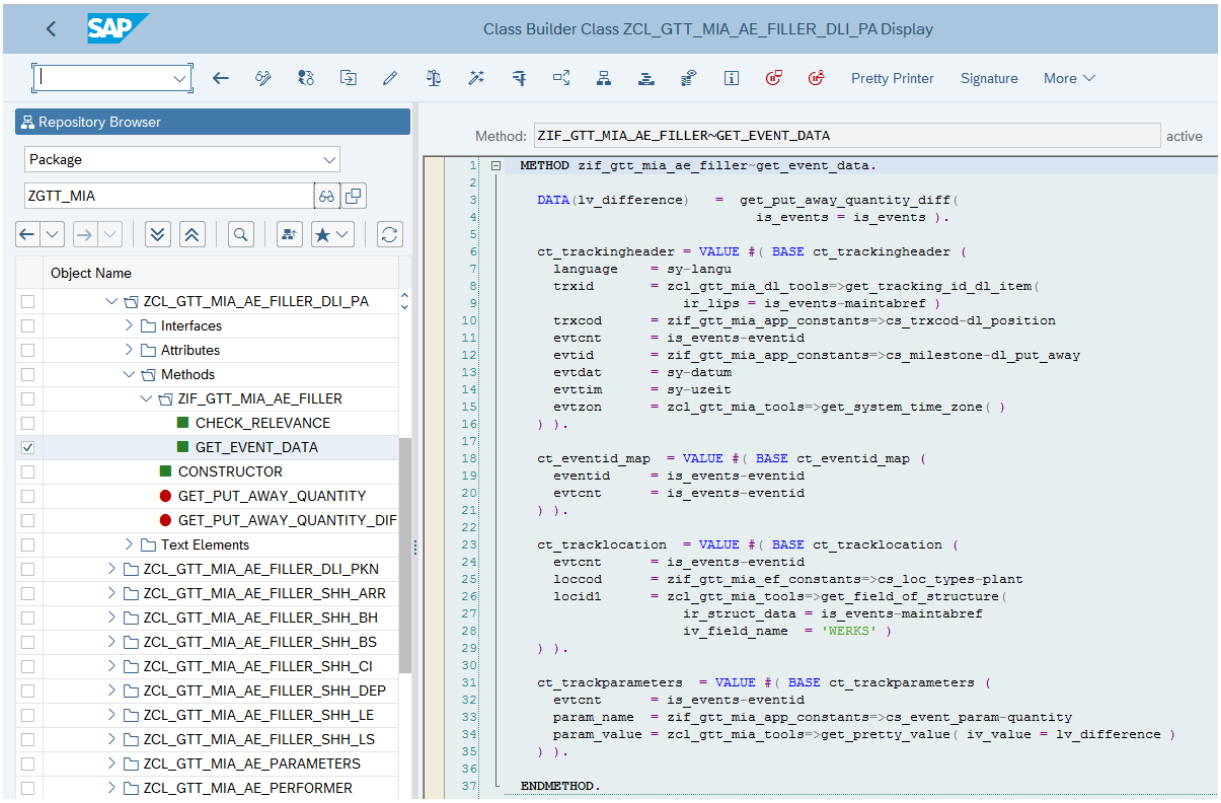
To customize the Event Data function modules, key points are as follows:

1. Make sure that the Main / Master tables follow the configuration of corresponding Event Type.
2. Add customization logic to fill in the output table CT_TRACKINGHEADER, CT_TRACKLOCATION, C_EVENTID_MAP.
3. If the event has user-defined fields in the *Manage Models* app, fill in the table CT_TRACKPARAMETERS.
4. Add two technical parameters with fixed names 'ACTUAL_TECHNICAL_TIMEZONE' and 'ACTUAL_TECHNICAL_DATETIME' which are recommended for fixing IDOC sequencing issue (after object creation in S/4 actual event might be processed before object creation in GTT via TP request, which leads to an error)
5. If the event has reference table information, fill in the table CT_TRACKREFERENCES.
6. The field CT_TRACKINGHEADER-SRCCOD, SRCID, SRCTX is used for event reason transport.
7. In the *Manage Models* app, click the *IDOC Integration* tab to map the user-defined parameter names and model field names.

See sample code of function: ZGTT_MIA_EE_DL_ITEM_PA.



Main logic of Inbound Delivery Item is implemented in class ZCL_GTT_MIA_AE_FILLER_DLI_PA:



5.7 Enhancement Codes for Cross-processes Tracking

The Fulfillment Tracking apps ask for cross-processes tracking, which is used in the following cases:

1. When the shipment process is updated and transported to GTT, the preceding inbound delivery and item process, and their planned events need to be updated and transported to GTT.
2. When the freight unit is updated and transported to GTT, the preceding inbound delivery and item process need to be updated and transported to GTT.

The cross-process tracking scenarios cover the following:

Shipment -> Inbound Delivery and Inbound Delivery Item:

1. Tracking ID (Delta Transport)
   - Case: Shipment Create / Delete with Delivery
   - Case: Shipment Assign / Unassign Delivery
2. Shipment Composition (Full Transport)
   - Case: Shipment Create / Delete with Delivery
   - Case: Shipment Assign / Unassign Delivery
3. Planned Event in Delivery (Full Transport)
   - Case: Shipment Create / Delete with Delivery / with stage
   - Case: Shipment Assign / Unassign Delivery / with stage
   - Case: Stage Assign / Unassign Delivery
   - Case: Stage Insert / Delete
   - Case: Stage Location Update
   - Case: Stage Planned Datetime Update
4. Planned Event in Delivery Item (Full Transport)
   - Case: Shipment Create / Delete with Delivery / with stage
   - Case: Shipment Assign / Unassign Delivery / with stage
   - Case: Stage Assign / Unassign Delivery
   - Case: Stage Insert / Delete
   - Case: Stage Location Update
   - Case: Stage Planned Datetime Update

Freight Unit -> Inbound Delivery and Inbound Delivery Item:

1. Freight Unit Relevant
   - Case: Freight Unit Create / Delete with Delivery
2. Freight Unit Composition
   - Case: Freight Unit Create / Delete with Delivery

5.8 Known Issue

5.8.1 Planned Event Extension Not Enabled

Currently, on the ERP side, the EXTENSION segment of process IDOC is not enabled for the planned event part, which means that you cannot make the user-defined fields for planned events in the *Manage Models* app.

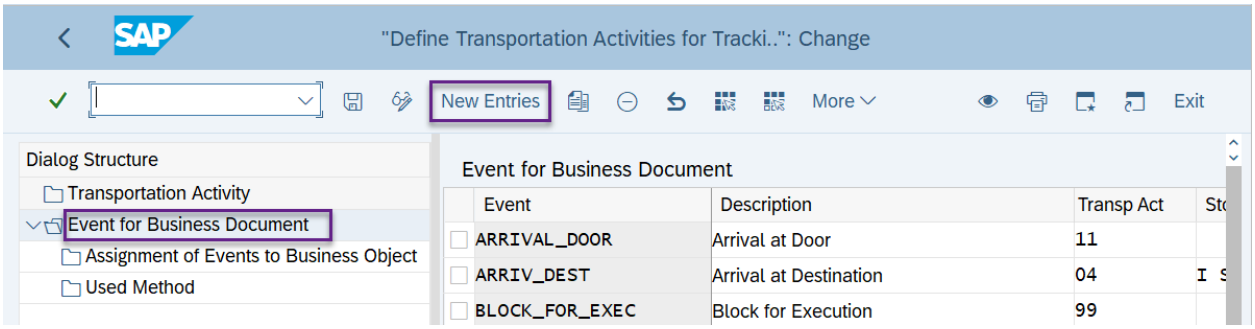
The workaround is to make use of Control Parameter's segment in IDOC and make the field mapping on the tracked process level in the *Manage Models* app.

Appendix: Define the Unplanned Events for Freight Booking

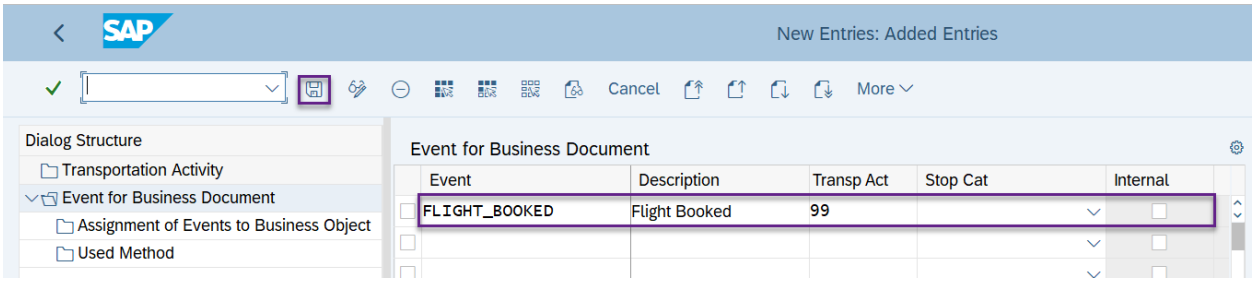
The unplanned events “Flight Booked”, “Manifest Ready”, “Received from Shipper”, and “Consignee Notified” will be sent from GTT to SAP TM. To receive these events in your SAP TM system, you need to define the unplanned events for freight booking by following the instructions below:

1. On the **Display IMG** page, click **Transportation Management**-> **Integration**-> **Tracking and Tracing of Processes and Documents**-> **Define Transportation Activities for Tracking and Tracing.**

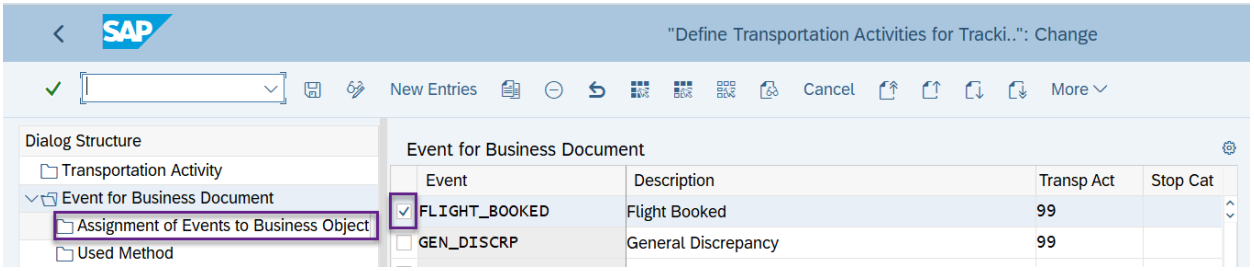
2. Select **Event for Business Document** and click **New Entries.**



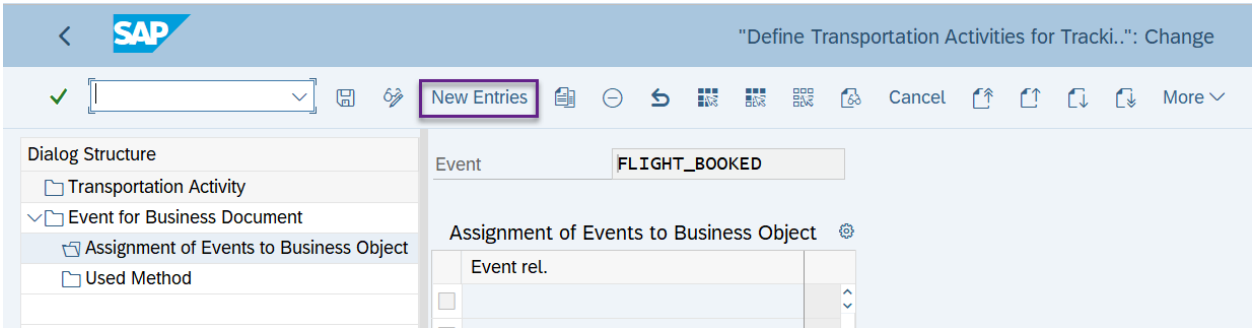
3. Input the **Event** name, **Description**, **Transp Act** and Click **Save.**



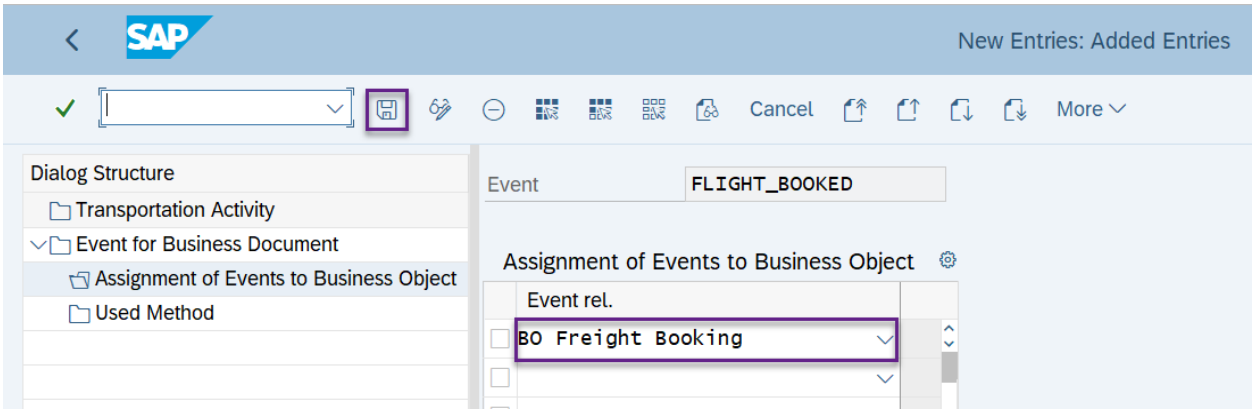
4. Select the event "FLIGHT_BOOKED", then double click **Assignment of Events to Business Object.**



5. Click **New Entries.**



6. Select **"**BO Freight Booking" and Click **Save.**



Hint:
After completing the configuration of 'Define Transportation Activities for Tracking and Tracing', the configuration should be as follows:

Event	Description	Transportation Activity	Stop Category	Event relevance for category
FLIGHT_BOOKED	Flight Booked	99	blank	BO (Freight Booking)
MANIFEST_READY	Manifest Ready	99	blank	BO (Freight Booking)
RCVD_FROM_SHIPPER	Received from Shipper	99	blank	BO (Freight Booking)
CONSIGNEE_NOTIFIED	Consignee Notified	99	blank	BO (Freight Booking)