

# Integrating GTS Tariffs in SAP: A Blueprint for Resilient Business Processes

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**Abstract**—A tariff refers to a system of taxes or duties imposed on goods or services when they are imported or exported across international borders. Essentially, it is a fee that businesses must pay when moving goods between countries, and tariffs are typically imposed by governments to regulate trade and protect domestic industries. In SAP, the calculation of a tariff involves various factors and requires the system to be configured to account for customs duties, taxes, and other related charges. This white paper explores one of the methods in SAP for calculating tariffs, detailing both the functional and technical setups necessary to automatically transfer the tariff liability to the customer.

**Keywords** – SAP S/4 HANA, GTS, HTS, COO

## I. INTRODUCTION

Tariff changes can have a substantial impact on business continuity, especially for companies involved in international trade. These changes can alter cost structures, disrupt supply chains, affect pricing strategies, and create new compliance demands. To mitigate these challenges, businesses are increasingly looking for solutions that offer the flexibility and agility required to quickly adapt to shifting tariff conditions. While SAP's Global Trade Services (GTS) provides tools for configuring and managing tariffs, businesses require a comprehensive end-to-end solution within S/4 to effectively pass tariff liabilities onto their customers.

## II. TARIFF MANAGEMENT IN SAP

SAP manages tariffs primarily through its SAP Global Trade Services (GTS) module, which provides a set of tools and functionalities for handling international trade, including tariff management. Key components required for calculating tariffs include:

### A. Harmonized Tariff Schedule (HTS)

The Harmonized Tariff Schedule (HTS) is a globally standardized system used to classify goods for customs purposes and determine applicable tariffs or duties in international trade. SAP GTS helps businesses manage tariff codes and associated duty rates, ensuring they are always aligned with the most current regulations and compliant with global tariff changes.

### B. Country of Origin (COO)

The Country of Origin refers to the country where a product is manufactured or produced. It is essential because tariffs and trade agreements are often based on the origin of goods. For materials managed in batches or lots, the country of origin is maintained within the batch master data in SAP, ensuring

accurate tracking for tariff calculation and compliance with international trade regulations.

### C. Incoterms

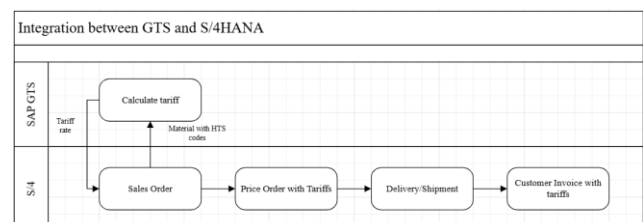
Incoterms (International Commercial Terms) are predefined rules used in international shipping to outline the responsibilities of buyers and sellers regarding the delivery of goods under sales contracts. For example, the DDP (Delivered Duty Paid) Incoterm places the responsibility of paying tariffs on the seller, while EXW (Ex Works) designates the buyer as responsible for tariff payments upon receipt of goods.

### D. Customs Value

The Customs Value is the value used by customs authorities to calculate applicable duties and taxes on imported goods. This value is typically based on the transaction price—the amount paid by the buyer to the seller—and is the most common basis for determining customs duty calculations. It may also include additional costs like shipping, insurance, and other charges depending on the Incoterms.

If all the above parameters are available at the time of creating the sales order, calculating or estimating the tariffs and pricing the order becomes relatively straightforward. The process flow for such a scenario is illustrated in Figure 1.

Figure 1 Integration between GTS and S/4 HANA



However, in most cases, businesses may not have information about the country of origin of goods when the sales order is created. This uncertainty can complicate the accurate calculation of tariffs, which often depend on the country of origin.

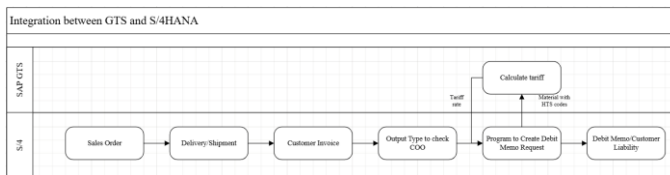
Typically, the country of origin is only available when the stock is picked for delivery and the shipment is completed. This underscores the need for a dynamic tariff calculation solution that can automatically retrieve HTS codes, determine the country of origin, and calculate the applicable tariff rates. These rates then need to be communicated to the S/4 system to ensure they are properly charged to customers.

### III. INTEGRATION BETWEEN S/4 HANA AND GTS

The integration between SAP GTS and S/4 HANA plays a crucial role in handling international trade compliance, especially regarding tariff processing. GTS provides the tariff rates required by S/4 HANA to generate additional invoices, transferring tariff liability to the customer.

To automate this process, a pricing condition type and an output type categorized as “8 – Special Function” can be used, which checks the country of origin for shipped goods using delivery or shipping documents. If tariffs are applicable based on the origin and destination countries, the system creates a tariff invoice. Process flow is illustrated in figure 2.

Figure 2 Process flow for Tariff Invoices



#### Process Steps

##### A. Sales Order and Delivery Creation

- 1) Once a sales order is created, delivery is initiated. During delivery creation, batches or lots are assigned based on availability. These batches may have multiple countries of origin, depending on inventory.

##### B. Customer Invoice Creation and Output Type Trigger

- 2) After delivery and shipment are completed, a customer invoice is generated. During invoice creation, a custom-configured output type is triggered. Custom routine assigned to the output type checks country of origin of the batches/lots and Landing country (destination). If tariffs are applicable for this origin-destination combination, the output type is activated for the billing document.

##### C. Background Job for Tariff Processing

- 3) A background job using **program RSNAST00** (used to issue output) is scheduled to process billing documents with active tariff conditions. This job triggers a custom program that performs the following tasks:
  - a) Determine the landing country of the shipment.
  - b) Identify the country of origin for all batches in the delivery.
  - c) Send material and origin data from S/4 to SAP GTS through a RFC enabled function module to retrieve the appropriate tariff rates
  - d) Create a debit memo request, and copy pricing conditions from the sales order or billing document.
  - e) In addition to the copied pricing conditions, a dedicated tariff pricing condition type is added, and the tariff rate retrieved from GTS is assigned as its value.

- f) Tariff amount is calculated using the following formula:  
Tariff Amount = (Customs Value or Sales Price) \* Tariff percentage rate

##### g) Example Calculation:

- Customs Value/Sales Price = 100,000
- Tariff Percentage = 10%
- Tariff Amount = 100,000 \* 0.1 = 10,000

##### D. Finance/AR Review and Posting

- 4) The Finance/Accounts Receivable (AR) team reviews the debit memo request.
- 5) Once tariff amounts are validated and approved, the debit memo is released to accounting, completing the transfer of liability to the customer

### IV. CONFIGURATION

The following steps outline the process for configuring output management and billing output procedures, specifically for creating a new tariff condition type:

##### A. Creation of Tariff Output Type

A new output type must be created to validate the landing country and the country of origin during billing document creation. Execute transaction V/40 – Maintain Condition Types V3 to create a new condition type.

##### 1) General Data Tab

- a) Enter a four-character string for the output type and its description.
- b) Set the Access Sequence to "0002".
- c) Check the box "Access to Conditions" to enable maintenance of output condition records for Sales Organization and Billing Type combinations.

Figure 3 Condition Type – General Data

##### 2) Default Values Tab

- a) Set Dispatch Time to “Send with periodically scheduled job”.
- b) Choose Transmission Medium as “Special function”.
- c) Set Partner Function to “BP – Bill to party”.

Figure 4 Condition Type – Default Values

- 3) Print Tab
  - a) From the dropdown, select "Sales Organization".
- 4) Processing Routines
  - a) Double-click "Processing Routines" on the left pane.
  - b) Enter the program name to be called by this output type to generate the debit memo request.

Figure 5 Processing routines

- 5) Partner Functions
  - a) Double-click "Partner Functions" in the left pane.
  - b) Select "Special Function" from the dropdown.
  - c) Add the "BP" partner function. This ensures the output type is triggered for the specified partner function.
  - d) Save the output type

Figure 6 Partner functions

## B. Create Custom Routine

Transaction VOFM is used to define custom ABAP routines that control how conditions—such as pricing, output, and taxes—behave during sales and billing processes.

- 1) To implement a custom routine, execute VOFM, specify a routine number, description, and set the application as V3.
- 2) The system will generate a template routine where you can write ABAP logic. Here we should implement a check to validate whether the delivery batches linked to the billing document have a valid combination of landing country and country of origin.

Figure 7 Custom Requirement Routines

Maintain: Requirements Output control			
Maintain: Requirements Output control			
Routine Number	Description	Active	Application
981	Tariffs	<input checked="" type="checkbox"/>	V3

## C. Assign Output Type to Output Procedure

Execute transaction V/42 that is used to define and assign output determination procedures that determine which output types (e.g., invoice print, email, Special functions) are triggered during billing document processing.

- 1) Select the output procedure and double click "Control" on the left pane
- 2) Enter the new output type under steps and assign the custom routine
- 3) Save the procedure

Figure 8 Output Procedure

Step	Cou...	Con...	Description	Requirement	Manual only
10	0	RD00	Invoice	62	
11	0	TM00	Invoice	62	
20	2	MAIL	Mail		
30	3	ESR0			
31	0	ZTAR	Tariff Output	981	
40	0	RDIV	Order-rel. ICB	18	
50	0	RD02	Invoice VDA	62	

## D. Create Pricing Condition Type

Transaction V/06 is used to create condition types that define how pricing elements—such as discounts, surcharges, freight, and taxes—are calculated in sales and billing documents. In this context, a dedicated pricing condition type is created to apply tariff rates to the customs value or sales price.

- 1) Click "New Entries" and enter a custom condition type along with a description.
- 2) Set the Condition Class to "B – Prices" and the Calculation Type to "A – Percentage". This configuration defines the condition as percentage-based, allowing the percentage rate received from GTS to be stored and applied to the customs value to determine the customer's tariff liability.
- 3) In the Manual Entries field, select "C – No limitations", and check the boxes for "Item Condition" and "Amount/Percent".
- 4) Click Save to finalize the creation of the condition type.

Figure 9 Pricing Condition Type

## E. Assign Pricing Condition Type to Pricing Procedure

Transaction V/08 is used to define and manage pricing procedures in SAP, which control how the final price of a sales document is calculated by combining various condition types (e.g., base price, discounts, surcharges, taxes, freight).

To enable tariff calculation, the relevant tariff pricing condition type must be incorporated into the pricing procedure.

- 1) Execute transaction V/08, select the appropriate pricing procedure, and double-click "Procedures – Control Data".
- 2) Insert the tariff pricing condition type in the correct sequence to ensure it is processed appropriately during price determination.
- 3) Select the "Manual only" checkbox for the condition type to ensure that the tariff amount is calculated by the custom program linked to the output condition and automatically populated in the pricing condition record of the billing document.

Figure 10 Pricing Procedure

Step	Calc.	Description	From ... To Step	Man...	Re...	Stat...	Rel...	Print Type	Subtotal	Requirement	Alt. Calc...	Alt. Ord...	Account...	Actuals
110	3	0000 Freight							6					5.07
115	0	0000 Freight							6					5.07
116	0	0000 Freight							6					5.07

#### A. Maintain Output Condition Records

Transaction VV31 is used to create condition records that determine when, how, and to whom outputs (e.g., invoices, debit memos, credit notes) are sent during billing.

A condition record is maintained for the combination of Sales Organization and Billing Type—as defined in access sequence 0002—for the output condition type ZTAR (Tariff Output). When a billing document is created with this combination, the assigned requirement routine is triggered.

If the specified conditions are met, output type ZTAR is activated for the billing document. Subsequently, a scheduled job using program RSNAST00 processes the output condition, which in turn calls the custom debit memo creation program defined in transaction V/40.

Figure 11 Output Condition Record

Bill. ...	Name	Funct	Partner	Me...	Date...	Langu...
F2	F2 Invoice	BP		8	1	

#### CONCLUSION

With tariffs frequently changing across countries, it is essential for businesses to have an IT solution that is scalable, adaptable, and requires minimal coding effort. The approach outlined in this paper enables organizations to efficiently manage tariff-related processes through master data maintenance, low-code enhancements, and configurable settings, ensuring agility and long-term sustainability.

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