

ERP-718 Integration Process - Upload Customs (HTS) Classification Codes Descartes to GTS

Approved

Status	Approved
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Jira Request ID	 ERP-497 - Jira project doesn't exist or you don't have permission to view it.
Jira Development ID	 ERP-718 - Jira project doesn't exist or you don't have permission to view it.

High- Level Specification

Parameter	Value
Application System (Source)	Descartes
Application System (Target)	SAP GTS E4H
Source System Interface	Descartes FTP Website
Target System Interface	ERP-720
Business Process Reference	12.02.01.01. Manage Classification Codes

Functional Overview

Syensqo uses Descartes (3rd party system) which is the market-leading global trade content for GTS that provides the most current regulatory data for Customs Classification Codes. HTS (Harmonized Tariff Schedule) codes are used to classify imported and exported goods. The first six digits are the international Harmonized System (HS) code, and the last four are specific to the U.S. and its import duties and statistical categories. New classification codes are always provided by Descartes on a regular basis via XML files.

The purpose of this integration specification is to automatize the process by, extracting the list of HTS (commodity & tariff codes) customs classification codes published by the Government from Descartes's website and upload it to GTS. The update should occur when a file is provided by Descartes. Updates can be received on a daily basis, hence the set up of the program will be marked as daily to do the file movement. The files will be taken from the directory path within Descartes website in a zip format. The files are supposed to be stored after successful upload to GTS system - audit purposes (the upload program to the GTS system is covered within FS: [ERP-720](#)).

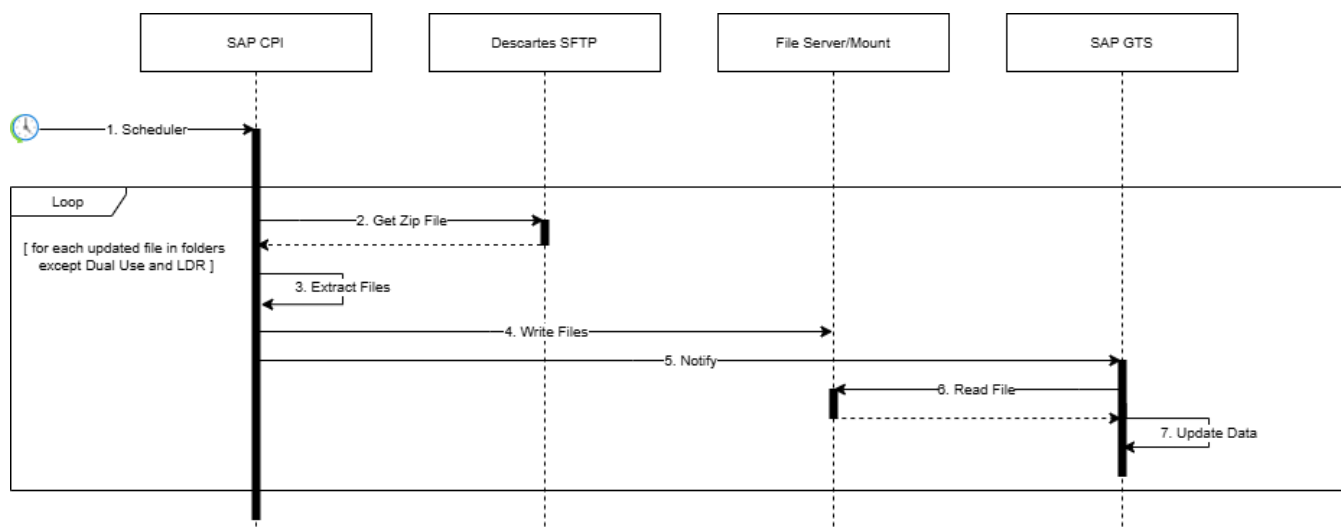
Scope and Objectives

While GTS is the leading system for classification codes and product assignment, this step is the prerequisite before classifying any product and before any export can happen in the system.

The emails that Descartes is sending to GTS IT team with the new classification codes will be replaced by this new automatization which follows one straight objective: to reduce the workload of man/hour which involves emails, dependency on an user action/availability or knowledge transfer within the team.

With the 3 different instances of GTS system for US, China and Rest of World, the HTS file must be available in all systems for the product-classification codes to happen.

Process Flow Diagram



	Description	Comment
1	A Scheduler in CPI initiates the Integration	To run on a daily basis
2	CPI connects to Descartes SFTP, looping through all Folders, and reads the updated ZIP files	Except for folder /E4H/Dual Use and LDR folder, all other folders are traversed Note: Contents from /E4H/Dual Use and LDR folder are described in ERP-716
3	CPI unzips each file, which contains multiple files	The files are in XML format
4	CPI sends the files required to load HTS data to GTS to a specified location in a File Server	The location should be accessible by S/4HANA
5	CPI raises a notification providing the filename to be processed	The notification is via Event Mesh
6	GTS Triggers the program to read the file from the file server	See ERP-720
7	The program updates the contents from the file to standard tables	See ERP-720

Assumptions

1. SAP Cloud Platform Integration connectivity is available.
2. SAP GTS E4H system is available at the time of extraction.

Dependencies

Descartes must published first the XML content for HTS codes.

Security, Integrity and Controls

- Connection to Descartes to retrieve files will use SAP Integration Suite Middleware CPI (download zip, unzip, upload) using secure protocols.

Configuration Requirements

N/A

Special Requirements

Overwriting should be possible. Whenever there is an emergency and cannot wait for the interface program to run, the GTS IT user can login to the FTP server, download the XML file and then upload the file to GTS manually.. However, at the next run of the program this should overwrite the entries stated by the GTS IT user.

Design Rationale

Existing process is a manual upload of HTS XML files on a regularly basis into GTS and it needs to be replaced by this automated solution (run on a daily basis).

- The CPI middleware will handle the file from FTP and push it to GTS (S/4 instance).
- Connection details:
 - SFTP Server: sftp://download.custominfo.com
 - Directory Path: /E4H/<Country Name> - i.e. all subfolders except for E4H/Dual User and LDR
 - Filename: E4H_HS*_<EXP/IMP>_EN_v*_U*.zip - See table below for the file list for each country
- Inside each of the relevant .zip files there are XML named such as this example "E4H_HSCH13VL_IMP_EN_DTR_v00172_U_001003". **Do not take pick up these XML for upload**, as they will all fail, the upload program is different as they are custom duty rates relevant - i.e. Any file with "DTR" should be ignored.

Note1: Any future country that might show up on E4H directory which is not listed below should also be picked up too; if the case, and same applies for the .zip files inside the subfolders.

- The parent directory contains all XMLs stored in format .zip.
- The program should download the .zip folders, unzip it and upload the XML files one by one or multiple files at once in GTS.
- If error appears during integration process, a notification should be send to the GTS IT users (see Interface Alert & Monitoring chapter).
- Once files are successfully uploaded, these should be archived inside GTS system.

Note2: always upload the latest version of the zip file. If at the time of the extraction the version number is same as per the last run program should end - no action.

Parent Directory (Country)	.Zip format (U= for updates)
United States/	E4H_HSUSXX_EXP_EN_vXXXXXX_U* E4H_HSGBXX_IMP_EN_vXXXXXX_U*
United Kingdom/	E4H_HSGBXX_IMP_EN_vXXXXXX_U*
United Arab Emirates/	E4H_HSAEXX_IMP_EN_vXXXXXX_U*
Thailand/	E4H_HSTSXX_IMP_EN_vXXXXXX_U*
Taiwan/	E4H_HSTWXX_IMP_EN_vXXXXXX_U*
Switzerland	E4H_HSCHXXXX_IMP_EN_vXXXXXX_U*
South Africa/	E4H_HSZAXX_IMP_EN_vXXXXXX_U*
Singapore/	E4H_HSSSXX_IMP_EN_vXXXXXX_U*
Saudi Arabia/	E4H_HSSAXX_IMP_EN_vXXXXXX_U*
Peru/	E4H_HSPEXX_IMP_EN_vXXXXXX_U*
New Zealand/	E4H_HSNZXX_IMP_EN_vXXXXXX_U*
Morocco/	E4H_HSMAXX_IMP_EN_vXXXXXX_U*
Mexico/	E4H_HSMXXX_IMP_EN_vXXXXXX_U*
Korea/	E4H_HSKRXX_IMP_EN_vXXXXXX_U* E4H_HSKRXX_IMP_KO_vXXXXXX_U*
Kazakhstan/	E4H_HSKZXX_IMP_EN_vXXXXXX_U*
Japan/	E4H_HSJPXX_IMP_EN_vXXXXXX_U*
Indonesia/	E4H_HSIDXX_IMP_EN_vXXXXXX_U*
India/	E4H_HSINXX_IMP_EN_vXXXXXX_U*
Hong Kong/	E4H_HSHKXX_IMP_EN_vXXXXXX_U*
European Union/	E4H_HSEUXX_IMP_EN_vXXXXXX_U*
Egypt/	E4H_HSEGXX_IMP_EN_vXXXXXX_U*
China/	E4H_HSCNXX_IMP_EN_vXXXXXX_U*
Chile/	E4H_HSCLXX_IMP_EN_vXXXXXX_U*
Canada/	E4H_HSCAXX_IMP_EN_vXXXXXX_U*

Brazil/	E4H_HSBRXX_IMP_EN_vXXXXX_U*
Australia/	E4H_HSAUXX_IMP_EN_vXXXXX_U*
Argentina/	E4H_HSARXX_IMP_EN_vXXXXX_U*

Data Structure

N/A

Source Structure

The following fields will be used to provide the required information for this interface:

Field	Description

Target Structure

The following fields will be used to provide the required information for this interface:

Field	Description

Mapping and Calculation

N/A

Source Table	API or Portlet Name	Source Field	Required (Y/N)	Description	Target Field	API or Portlet Name	Target Field	Required (Y/N)	Description	Rule Type	Rule Instruction

Processing Logic

Processing within Source

For this integration there will be no processing within the Source.

Processing within Middleware

CPI will pass the file without modification or transformation.

Processing within Target

The files will not be modified in the target but placed directly in the file server without any transformation. This interface will also trigger the custom proxy developed as part of [ERP-720](#).

The files fetched from the data provider will be uploaded to GTS system using standard transaction /n/SAPSL/LLNS_UPL101.

Interface Dependency

N/A

Interface Constraints

Upon polling, if CPI finds an updated file in Data Provider (Descartes) SFTP, it will be processed. The check is required to be done on a daily basis.

Descartes does not provide a Test or Dev tenant, so all CPI and GTS tenants will connect and access the Production Descartes SFTP.

Delivery Requirements

This interface should work like a batch program which runs on the same time every day (TBD the time of the daily run).

Delta or Full Load Requirements

During cutover activities, the first upload will be considered as the initial upload for HTS XML classification codes.

After that, the rest are considered delta, whenever new codes shows up or changes, where this custom integration process will be used.

Interface Alert & Monitoring

Technical alerts are sent to the GTS IT super user team listed under sco-digops-gts@syensqo.com in case the interface face any issues.

CALM interface alerts are send out if the interface has an issue allowing users to monitor and manage system.

Interface Reporting

N/A

Language Requirements

English

User Interface Requirements

N/A

Volumetrics

The zip files can be up to 10MB.

Daily load must take place for all the XML files available under the folders specified within *Design rationale* chapter. At this moment is known that for Japan, Europe and Korea there will be 2 files/day (note that this can vary depending on the content provider website). In total there are around 26 countries for the execution.

Performance Consideration

For the XML size, reach out to the owner of the FS to get the details to login to Descartes website and to do the technical check.

Error Handling

When a file has errors during upload the file is not archived from the directory. A notification is sent to the GTS IT user to check the error. Worst case, the user must upload manually the XML and do correction manually in GTS.

Log requirements (Is there a log that shows the job has run?):

1. Extract - Not able to access folder *notification via Fiori Launchpad to the GTS IT users*

- 2. No file available at the time when the custom program is scheduled to run *End program.*
- 3. Always upload the latest version of the zip file. If at the time of the extraction the version number is same as per the last run *End program.*

Testing

How to Test

The Integration depends on the files in Descartes Production system are updated. Therefore testing of the integration will be limited to the initial run of files. Once Descartes provides updated files, the data can be validated

Test Conditions and Expected Results

ID	Condition	Expected Results
1	Files from Descartes folder to be uploaded	File should be fetched from Descartes and updated the files hare in XML format

Test Considerations/Dependencies

Test the file interface program and then test the standard transaction to upload the file to GTS system.

Other Information

Development Details

Package

Package Name	Parent Package

Other Development Objects

Object Type	Object Name	Purpose/High Level Logic	Design Rationale Reference

Appendix

See also

File	Modified
File -Process Flow - Sequence Diagram.tmp draw.io Draft	Dec 11, 2025 by EPASINGHE-ext, Kapila

[Download All](#)

Change log

Version	Published	Changed By	Comment
CURRENT (v. 38)	Dec 12, 2025 09:12	EPASINGHE-ext, Kapila	
v. 37	Dec 12, 2025 09:11	EPASINGHE-ext, Kapila	
v. 36	Dec 12, 2025 09:10	EPASINGHE-ext, Kapila	minor update
v. 35	Dec 12, 2025 08:39	TATARU-ext, Eugenia	
v. 34	Dec 12, 2025 08:38	TATARU-ext, Eugenia	
v. 33	Dec 11, 2025 15:56	TATARU-ext, Eugenia	
v. 32	Dec 11, 2025 15:53	TATARU-ext, Eugenia	
v. 31	Dec 11, 2025 15:01	TATARU-ext, Eugenia	
v. 30	Dec 11, 2025 14:58	TATARU-ext, Eugenia	
v. 29	Dec 11, 2025 14:48	EPASINGHE-ext, Kapila	

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Workflow history

This view shows the 5 most recent entries. The complete workflow log is available from the 'Document Activity' menu item.

Mar 15, 2026	Actor	Type	Activity	Version
Approved	 NARAHARI-ext, Bhargavi	State	changed state to Approved at 1:06 pm	v38
Lead Approval	 NARAHARI-ext, Bhargavi	State	gave <i>POD Lead Review</i> approval at 1:06 pm	
Dec 12, 2025				
	EPASINGHE-ext, Kapila and TATARU-ext, Eugenia	Edit	multiple updates from  EPASINGHE-ext, Kapila and  TAT ARU-ext, Eugenia	
	 EPASINGHE-ext, Kapila	State	changed expiry date to '19 Dec, 2025 08:13 am' at 8:13 am	
		State	changed state to Lead Approval at 8:13 am	v38
Tech Review	 EPASINGHE-ext, Kapila	State	gave <i>Tech Review</i> approval at 8:13 am	
			Completed	