

KB – SAP Global Next Connection Tester

PURPOSE

The purpose of this utility program is to allow for testing the connectivity between SAP and Thomson Reuters Determination. Due to SAP having limitations in their SOAMANAGER Ping Test or with the SE80 - Consumer Proxy Test functions when using Secure HTTP (HTTPS) service endpoints a utility program needs to be provided that allows customers to test the service framework easily. Thomson Reuters Product Management has recognized this need and plans to include a connection tester utility within the Global Next solution in one of their future releases. In the meantime, this utility program closes that gap.

REFERENCE

The most current version of this document can be found on the ONESOURCE Indirect Tax Support site at [KB 000103566](#). Please make sure you always have the most current version of this document.

PREREQUISITES

- Understanding of SAP APBA programming
- Global Next release installed in SAP system and the following configurations done:
 - SAOP Interface Proxy setup done according to the Install and Programmers Guide
 - Proxy Configuration
 - WS Service Security Configuration
 - Log Number Range
 - Log Configuration
- ONESOURCE Customer instance setup and accessible.
- Program files download from this KB to a local directory.

PROGRAM CREATION

In order to test the connectivity a custom program has to be created with code provided by Thomson Reuters via this KB. The program can be created as a \$TMP program or if desired in a customer package. These instructions assume the code is implemented as a TMP program.

PROGRAM - ZIDT_GLOBAL_NEXT_CONNECTOR

This is the main code of the solution and the executable application. Follow below steps to create the program:

1. Transaction SE38, enter program name ZIDT_GLOBAL_NEXT_CONNECTOR, click "Create"
2. On the pop-up enter a program name, like *Global Next Connector Tester*. Select Type "Executable Program", select "Save"
3. Either assign the program to a package or select "Local Object" which will create the program in the \$TMP space.
4. In the Editor screen select menu Utilities -> More Utilities -> Upload/Download -> Upload...
5. Navigate to the directory where you saved the program files attached to the KB.
6. Select the *Mainprogram-ZIDT_GLOBAL_NEXT_CONNECTOR.txt* file and upload it. Save the program.
7. SAP has now created your main program with the TR code. Navigate to [INCLUDE](#) `zidt_gn_connect_screen.` (line 54) and click on the `zidt_gn_connect_screen` section.
8. Create the new object when asked by SAP and confirm the pop-up window by clicking Save.
9. Assign a package or create the screen in the \$TMP space.
10. Repeat uploading process as outlined in steps 4-6, but this time upload the *SelectionScreen-ZIDT_GN_CONNECT_SCREEN.txt* file.
11. Save the include and return to the main program. Activate (Ctrl+F3) the program and **all its objects**.
12. Use menu path Goto -> Text Elements -> Text Symbols.
13. Copy the following values:

```
001  PROXY SETTINGS
002  REQUEST DATA
```

14. Switch to the Selection Text tab and copy the Text for each of the Named variable:

P_CURR	Currency Code
P_C_EX	External Company ID
P_SELREG	Seller Registrations
P_SFSTAT	Ship From State / Province
P_SHIPF	Ship From Country
P_SHIPT	Ship To Country
P_SORDER	Sort Order
P_STSTAT	Ship To State / Province

15. Save and Activate the program. Return to the main screen.

You have now successfully created the custom Connection Tester program.

RUNNING THE CONNECTION TESTER

The Connection Tester's purpose is to ensure that the framework between your SAP system and the Thomson Reuters Determination is properly setup and configured. To do so the tool will read relevant configurations from your Global Next setup and then create a simple XML request that is sent via the Internet Communication Framework in SAP to the Tax Engine. It will test connectivity, proper authentication, and make a simple tax calc if a company has been setup. The Connection Tester will provide a success or error message and will provide request and response logs in /n/IDT/LOG if configured. The tool is not a tax calculator or tax modeling tool.

SELECTION SCREEN

To run the Connection Tester, go to transaction SE38 and Execute (F8). On the selection screen some default values are presented. Override them if applicable with your implementation specific value.

Sort Order:	This is the proxy sort order to be tested. See /n/IDT/PROXY_CONFIG for configured proxies.
External Company ID:	This has to match the ID maintained in the Company setup of Determination under External Company ID. For Indirect Tax Cloud customers this would be their account number and company code concatenated, i.e. 12345678_3000
Currency Code:	Must be a valid 3-digit currency code recognized by Determination.
Ship From Country:	Must be a valid 2-digit country code recognized by Determination.
Ship From State / Province:	Must be a valid 2-digit state (US only) or province (rest of world) code recognized by Determination.
Ship To Country:	Must be a valid 2-digit country code recognized by Determination.
Ship To State / Province:	Must be a valid 2-digit state (US only) or province (rest of world) code recognized by Determination.
Seller Registration:	Must be a valid registration number for the country the test is run,

Once proper data has been entered the program can be run via Execute (F8).

SAMPLE TEST DATA

US Test Sample:

Sort Order	100001
External Company ID	12345678_3000
Currency Code	USD
Ship From Country	US
Ship From State / Province	WA
Ship To Country	US
Ship To State / Province	WA
Seller Registrations	

German Test Sample:

Sort Order	100001
External Company ID	12345678_1000
Currency Code	EUR
Ship From Country	DE
Ship From State / Province	
Ship To Country	DE
Ship To State / Province	
Seller Registrations	DE123456787

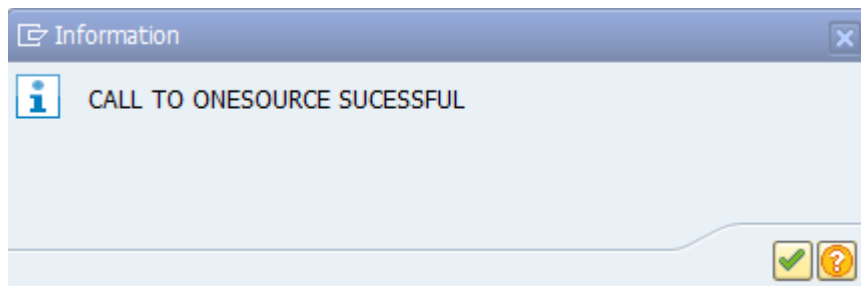
India Test Sample:

Sort Order	100001
External Company ID	12345678_4300
Currency Code	INR
Ship From Country	IN
Ship From State / Province	GJ
Ship To Country	IN
Ship To State / Province	GJ
Seller Registrations	24AAACI5617C1ZY

TEST RESULTS

SUCCESS

The Connection Tester considers a test successful if the XML Request was able to reach the tax engine, regardless if a proper tax calculation took place. Only communication framework issues will result in an error message.



In addition, the request and response XML will be logged to the /n/IDT/LOG tables. Connection Tester results will be logged under the username who run the ABAP program and transaction code GNCONNECTTEST.

Log Reader Report

Log Count	Log Date	Time	User Name	Transaction code	Doc Number	CoC...	# Errors	Log Level
110891	07/02/2020	12:21:11	STEFANB	GNCONNECTTEST		*	0	DEBUG
110890	07/02/2020	11:21:50	STEFANB	GNCONNECTTEST		*	0	DEBUG

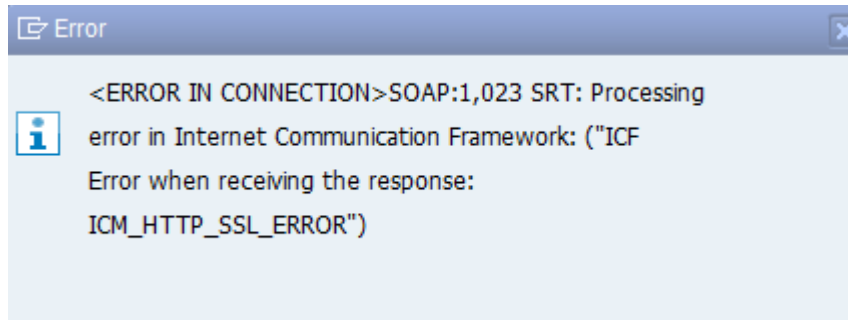
Document Display

```
<?xml version="1.0" encoding="UTF-8"?>
- <LOG>
  - <taxCalculationRequest xmlns="http://www.sabrix.com/services/taxcalculationservice/2011-09-01">
    - <PARAMETERS>
      - <INDATA version="G">
        - <INVOICE>
          <CALLING_SYSTEM_NUMBER>400</CALLING_SYSTEM_NUMBER>
          <COMPANY_ROLE>S</COMPANY_ROLE>
          <CURRENCY_CODE>USD</CURRENCY_CODE>
          <EXTERNAL_COMPANY_ID>12345678_3000</EXTERNAL_COMPANY_ID>
          <HOST_SYSTEM>C05</HOST_SYSTEM>
          <INVOICE_DATE>20200702</INVOICE_DATE>
          <INVOICE_NUMBER>12345</INVOICE_NUMBER>
          <TRANSACTION_TYPE>CS</TRANSACTION_TYPE>
```

FAILURE

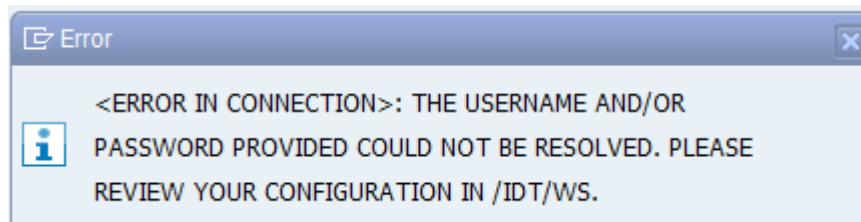
ICF Error

In a scenario where the SOAMANAGER configuration isn't properly configured the Connection Tester will return that error message. Such errors would also be shown during a ping test in SOAMANAGER.



Wrong user name and/or password

In a scenario where the user name and/or password doesn't match to one setup in Determination the following error will be returned.



User name and/or password not matching External Company ID

In a scenario the user name/password pair is valid, but it doesn't match to the External Company ID or doesn't have the proper permission to calculate tax. The Connection Tester will return a **SUCCESS** status (the connection to the tax engine did work after all).

```
- <OUTDATA version="G">
  - <REQUEST_STATUS>
    - <ERROR>
      <CODE>CALC_AUTHENTICATION_FAILED_PERMISSIONS</CODE>
      <DESCRIPTION>Calculation authentication failed because the authenticated user did
        not have the roles required to calculate tax for this company.</DESCRIPTION>
      <ERROR_LOCATION_PATH>/OUTDATA/INVOICE[INVOICE_NUMBER='12345']
        </ERROR_LOCATION_PATH>
    </ERROR>
  </REQUEST_STATUS>
```

Wrong Company

In a scenario the External Company isn't a valid one. The Connection Tester will return a **SUCCESS** status (the connection to the tax engine did work after all).

```
- <OUTDATA version="G">
  - <REQUEST_STATUS>
    - <ERROR>
      <CODE>COMPANY_NOT_FOUND</CODE>
      <DESCRIPTION>Unknown Company.</DESCRIPTION>
      <ERROR_LOCATION_PATH>/OUTDATA/INVOICE[INVOICE_NUMBER='12345']
        </ERROR_LOCATION_PATH>
    </ERROR>
```

There could be other scenarios where the tax engine returns tax calculation errors, but the purpose of the Connection Tester isn't to test tax policy setup, but rather confirm that SAP and Determination can communicate proper.