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1. Product description and requirements

NIP Checker enables checking business partners by tax ID in Finance Ministry/European Union databases. It extends standard functionality of an SAP system. NIP Checker consist of two parts: a service provided by BCC (web service) and a software product (ABAP part) in the SAP system.

Capabilities of NIP Checker:

- **Tax activity check by tax ID in Finance Ministry/European Union databases in transaction /n/BCC/JPN:**
  - **Validation of JPK_VAT file**
  - **Validation of suppliers' and receivers' master data in SAP system**
  - **Validation of manually entered tax IDs**
  - **Validation of TAX ID filled in by customer extension**
- **Integration with JPK Transfer – possibility of checking JPK_VAT file before sending**
- **Providing Application Programming Interface (API) to use tax ID checking in other programs or customer extensions (e.g. possible to integrate NIP Checker via API to check Tax ID during executing business transactions like: orders, sales, posting and invoice)**
- **Caching checks so that checks were done quicker and checks' limit was saved**
- **Displaying checks history for a given Tax ID, Customer, Vendor**
- **Printing confirmations of Tax ID check**

1.1. Technical requirements

Component	Recommended version
Kernel	6.0 or higher

1.2. Package content

Basic transactions in NIP Checker:

Transaction ID	Description
/BCC/JPN	NIP Checker – starting checks and viewing checks logs
/BCC/JPN1	NIP Checker – TAX ID checking history
/BCC/JPNC	NIP Checker – configuration

Transaction /n/BCC/JPNC enables configuration. Configuration's details were described in installation guide.

Transaction /n/BCC/JPN is a basic transaction of the NIP Checker solution that enables checking contractor's tax activity by tax ID in Ministry of Finace and European Union data base.

Transaction /n/BCC/JPN1 allows to display one Tax ID checks history (allows also displaying history for a given customer/ vendor).

Additionally, in case of using JPK Transfer solution or using Transfer Engine connection two additional transactions are useful:

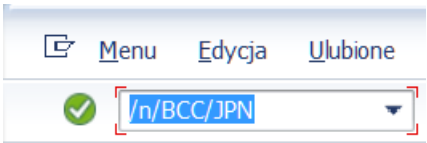
Transaction ID	Description
/BCC/JPT	JPK Transfer Monitor
/BCC/JPN_SHUTDOWN	NIP Checker – shutdown Transfer Engine

In this user guide transactions /n/BCC/JPN , /n/BCC/JPN1 and /n/BCC/JPT are described in integration with NIP Checker area. The rest of the transactions are described in installation guide.

2. Transactions and programs

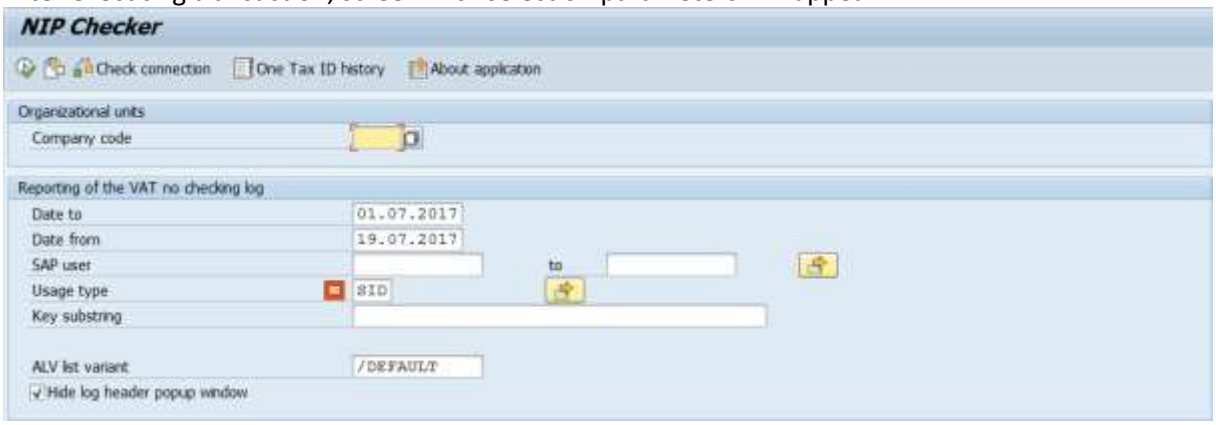
2.1. NIP Checker - main transaction

To use that product it is necessary to call transaction /BCC/JPN by inserting sequence /n/BCC/JPT or call transaction by user menu.



2.2. NIP Checker - main transaction – selection screen

After executing transaction, screen with selection parameters will appear



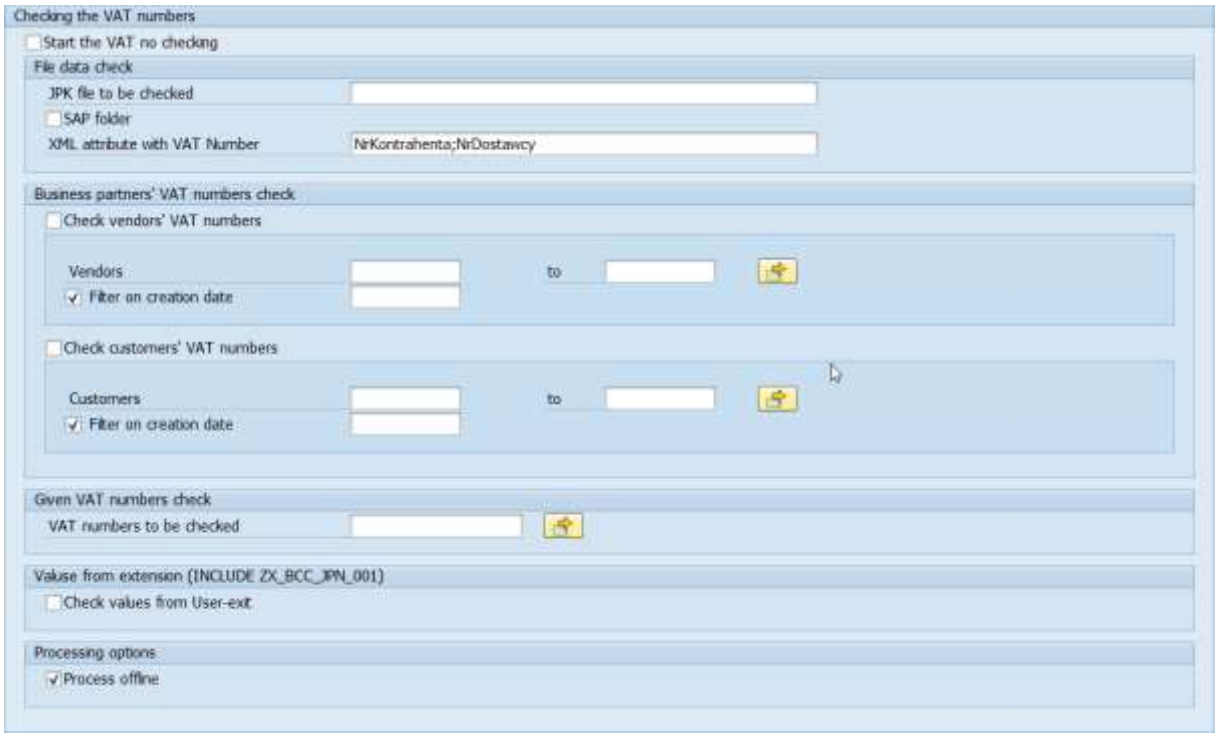
Important icons are placed on icon's bar:

Icon name	Icon description
Check connection	It validates first connection: with NIP Checker service (in case of direct connection (D)) and with Transfer Engine (in case of connection by Transfer Engine).
One Tax ID history	Switches to /n/BCC/JPN1 transaction allowing to display the history of checking a given Tax ID.
About application	It displays product version number/ allows checking for update and direct to newest manuals webpage.

At the top part of the selection screen data restrictions for the displayed log records (ALV list) are present. Meaning of that fields is described in following table:

Field name	Field description	Required/ Optional/ Not inserted	User activity and value	Comment
Company Code	Company code against which the authorization will be checked (see USE_JPN_AUTH_OBJECT parameter in installation manual)	Required	Manual entry/picklist	The company code is also used to: - define default files directory (parameters FILE_DEF_PATH, FILE_DEF_SAP) - limit the checks for vendors/ customers to given CC
Date from	Start date of tax ID's check	Required	Manual entry/picklist	
Date to	End date of tax ID's check	Required	Manual entry/ picklist	
SAP user	User who executed analysis.	Optional	Manual entry/ picklist	Option
Usage mode	Define ID of usage mode – first 3 letters of ID validation sequence (file name)	Optional	Manual entry/ picklist	Option Default usage mode in transaction /BCC/JPN is CHK. User who creates extension by API uses usually another usage mode (SID/GID). Mentioned functionality makes it simpler to identify where validation was executed in system.
Sequence included validation in key	Define character sequence which has to be included in ID validation sequence (validation key) Simplifying log search	Optional	Manual entry	Field that was left empty is not filtering results. It helps to find validation.
ALV list variant	Define structure of ALV list's columns	Optional	Manual entry/ picklist	Default columnar structure is delivered with product.
Hide log header popup window	Decides whether after first double click on a log line the summary of the log (header) is displayed or directly the popup with check details is displayed (default)	Optional	Checkbox	See configuration parameter LOGSUM_HIDE in installation manual.

Downside of the selection screen enables executing checking of tax ID in few variants:
- validation of XML JPK_VAT file,
- validation of suppliers/receivers/business partners master data,
- validation of tax ID that was manually entered,
- validation of tax ID that was determined by user extension (ZX_BCC_JPN_P002).



Important:
The selection screen of transaction /n/BCC/JPN depends on configuration. Some parts of this screen can be hidden, if not used – see configuration parameters SHOW_VEND_CUST, SHOW_BP, SHOW_ACTION, SHOW_EXIT in installation manual.

Important:
Apart of VAT ID checking, the transaction can also set partner locks after checking. This can be used e.g. to call this as background job to lock all newly created vendors/costomenrs/business partners that have incorrect VAT IDs. If company code is given then partner locks are set on company code level. For * as company code the general partner locks are set.

Following table describes the meaning of fields:

Field name	Field description	Required/ Optional/ Not inserted	User activity and value	Comment
Start the VAT no checking	If not ticked, only positions from first log will be displayed. Ticking this option executes processing in pursuance of elements from second selection.	Optional	Checkbox selection	

File validation				
JPK file to be checked	XML file from which tax IDs would be selected and validated	Optional	Manual entry/ picklist	Optional. Validation starts only if non-empty sequence is entered in that field.
SAP Folder	Determines file's localization: on workstation (SAP directory = empty) or on SAP application server (X).	Optional	Checkbox selection	
XML attribute list with tax ID	Sequence that describes XML file's attribute list from which tax ID would be loaded	Optional.	Manual entry One can enter up to three attributes separated by semicolon sign ";"	Default value can be set by configuration parameter FILE_DEF_XML_ATTR
Vendors/ Customers tax ID check (shown if SHOW_VEND_CUST parameter is not empty)				
Vendors tax ID check	Determine if supplier's tax ID will be checked	Optional	Checkbox selection	
Vendors	Define vendors checking range	Optional	Manual entry/ picklist	Undeclared range means that all of suppliers will be checked
Filter on creation date / creation date/ offset	If ticked and date is declared, only vendors created on or after declared date will be checked If ticked and start date is empty and offset is given (default 0), then start date will be calculated on the base of current day and offset (e.g. offset = 1, tells to check all partners created starting from yesterday)	Optional	Manual entry/ picklist	Unticked checkbox means that all of suppliers will be checked Offset is prepared especially for use in background jobs together with actions executed after checking
Do not show locked	If checked then master data records for locked partner (either globally or at company code level are excluded from processing	Optional	Checkbox selection	
Customer tax ID check	Determine if customers' tax ID will be checked	Optional	Checkbox selection	
Customers	Define receivers checking range	Optional	Manual entry/ picklist	Undeclared range means that all of receivers will be checked

Filter on creation date / creation date / offset	If ticked and date is declared, only customers created on or after declared date will be checked If ticked and start date is empty and offset is given (default 0), then start date will be calculated on the base of current day and offset (e.g. offset = 1, tells to check all partners created starting from yesterday)	Optional	Manual entry/ picklist	Unticked checkbox means that all of customers will be checked Offset is prepared especially for use in background jobs together with actions executed after checking
Do not show locked	If checked then master data records for locked partner (either globally or at company code level are excluded from processing	Optional	Checkbox selection	
Business Partner's tax ID check (shown if SHOW_BP parameter is set to X)				
BP tax ID check	Determine if BPr's tax ID will be checked	Optional	Checkbox selection	
Business Partners	Define BP checking range	Optional	Manual entry/ picklist	Undeclared range means that all of BPs will be checked
BP role	Allows filtering via roles of BP			Undeclared means that BPs in all roles will be checked
Filter on creation date / creation date / offset	If ticked and date is declared, only partners created on or after declared date will be checked If ticked and start date is empty and offset is given (default 0), then start date will be calculated on the base of current day and offset (e.g. offset = 1, tells to check all partners created starting from yesterday)	Optional	Manual entry/ picklist	Undeclared date or unticked checkbox means that all of BP will be checked Offset is prepared especially for use in background jobs together with actions executed after checking
Do not show locked	If checked then master data records for locked partner (either globally or at company code level are excluded from processing	Optional	Checkbox selection	
Execute additional actions (shown if SHOW_ACTIONparameter is set to X)				
Execute additional actions	Switches on/off execution of additional actions after VAT checking. Meant to be used mostly in planned job in background (e.g. every day)	Optional	Checkbox selection	If this option is checked then *Process offline* option must be unchecked!
PL Lock inactive	Locks partners for Polish inactive NIPs.	Optional	Checkbox selection	

PL Lock incorrect	Locks partners for Polish incorrect NIPs.	Optional	Checkbox selection	
PL Lock exempted	Locks partners for Polish exempted NIPs.	Optional	Checkbox selection	
EU Lock inactive	Locks partners for EU inactive NIPs.	Optional	Checkbox selection	
EU Lock incorrect	Locks partners for EU incorrect NIPs.	Optional	Checkbox selection	
EU Lock exempted	Locks partners for EU exempted NIPs.	Optional	Checkbox selection	
Check of inserted tax ID				
Tax IDs to be checked	Checking declared tax IDs	Optional	Manual entry/ picklist	Empty tax ID's field means that tax ID will not be checked
Values from extension/user exit (shown if SHOW_EXIT parameter is set to X)				

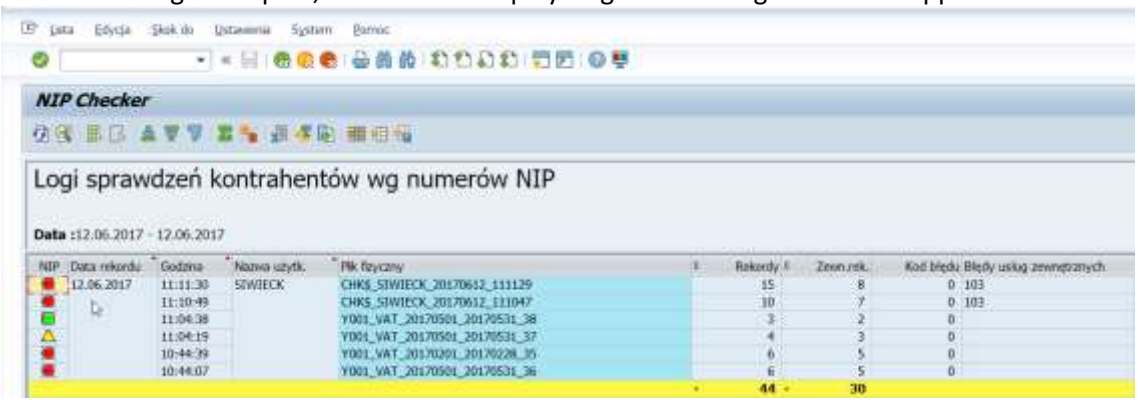
Values from User Exit validation	Execute values checking by user exit ZX_BCC_JPN_T001s ZX_BCC_JPN_T001	Optional	Checkbox selection	In "include" that was created by user it is necessary to fill table:
				
				`lt_VATNO4`
				`type /BCC/JPN_TT_VATNO.`

Processing				
Background processing	If ticked, tax ID checking will be processed in background (user can refresh the report until result appears).	Optional	Checkbox selection	User see process icon on log position (sprocket) during waiting time.
Ignore domestic TAX ID prefix	If ticked, tax ID prefix 'PL' will be removed from VAT numbers and e.g "PL7831007209" will be treated as "7831007209".	Optional	Checkbox selection	Visible only if there is letter S in the value of configuration parameter: REMOVE_DOMESTIC_PREF

To execute the report user has to press execution icon (F8) .

2.3 NIP Checker – main transaction – reporting screen

After executing the report, ALV list that displays logs of checking tax IDs will appear:



Following table describes the meaning of fields:

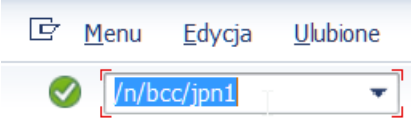
Field	Description
Tax ID	Overall status of checking tax ID: - at least one of tax IDs is incorrect - at least one of tax IDs is released (warning) - all of tax IDs are OK (no errors and warnings) - in processing
Record date	Date when log's entry was created
Time	Time when log's entry was created
User	User who executes checking
File	Log's unique ID. If ticked then checking log's ID is a file name (without extension)
Record	Amount of all records that are validated
External record	Amount of all records that was validated externally (records set to be ignored in configuration are not checked, e.g. empty value or incorrect syntax)
Error code	0 means that check was finished with positive result (value >0 means that error occurred)
External services errors	Empty value means that no errors were found. Possible error codes: 100 – limit of monthly checks was exceeded 101 – incorrect service ID/ID2 102 – connection with BCC server failure 103 – connection with external service failure 104 – Tax ID is not supported by test gateway (supported numbers: 5213003700, 5252242171, 7171642051, 7272445205)

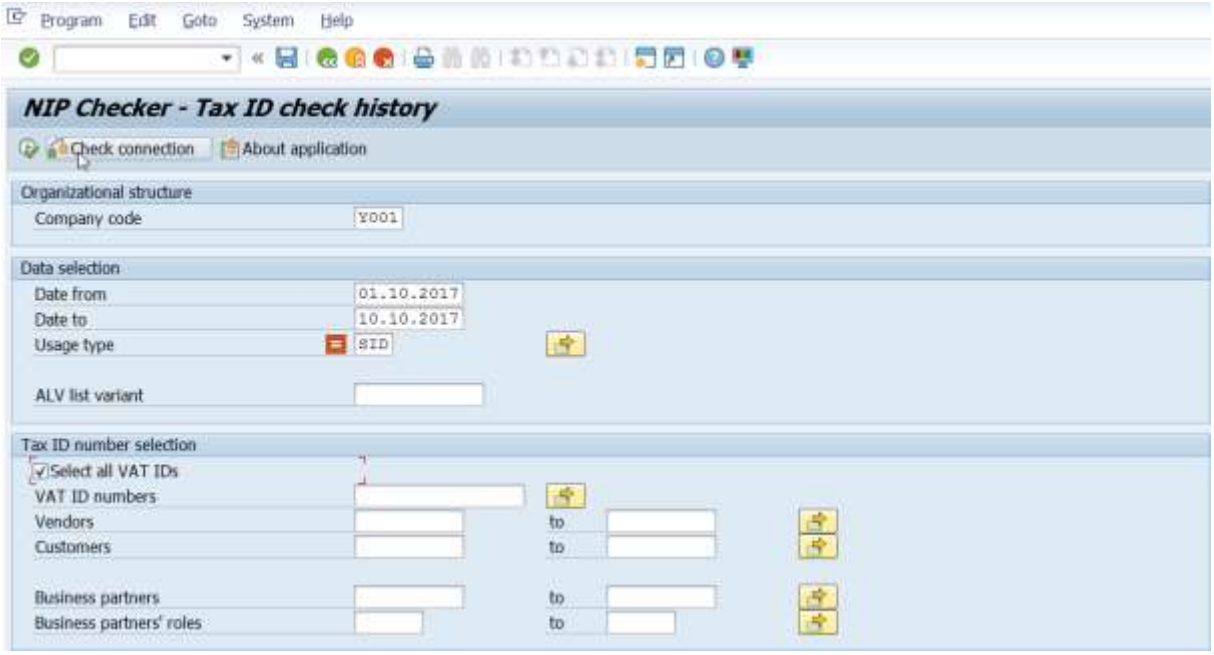
Double click on any of report log line bringing list with summarized or detailed information of selected log line e.g.:

Double-click on that pop-up to drill-down and display details of checking for each VAT number (**possibility to filter it and to print it**). **Doube click on Master data/ Lock column to execute master data change or locks processing.**

2.4 NIP Checker – history of TAX ID checking

Transaction /n/BCC/JPN1 allows to display the history of Tax ID checking (it can be also accessed from transaction /n/BCC/JPN via button *TAX ID History*).





Meaning of the selection fields is described in following table:

Field name	Field description	Required/Optional/Not inserted	User activity and value	Comment
Company code	Company code against which the authorization will be checked (see USE_JPN_AUTH_OBJECT parameter in installation manual)	Required see Comment	Manual entry/picklist	
Date from	Limits the date of the history to be displayed	Required	Manual entry/picklist	
Date to	Limits the date of the history to be displayed	Required	Manual entry/picklist	
Usage type	Allows selecting usage types to be displayed	Optional	Manual entry/picklist	Usage Type equals to first three letters of log ID.

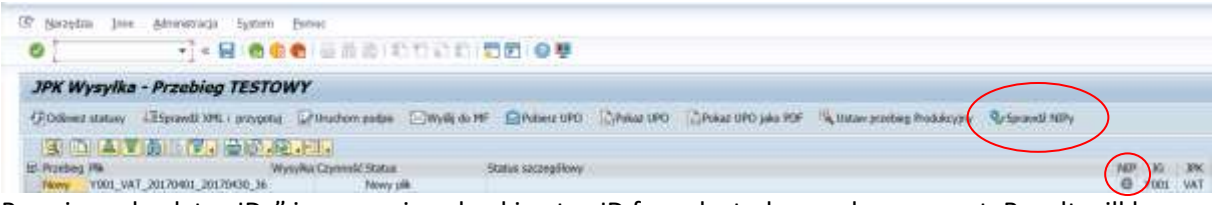
ALV list variant	Allows to choose variants, that describes ALV list layout	Optional	Manual entry/picklist	
Tax code	Tax ID for which history should be displayed.	Required see Comment	Manual entry/picklist	The user should enter one of three parameters: - Tax ID - Vendor - Customer
Vendor	Vendor for which tax ID history should be displayed.	Required see Comment	Manual entry/picklist	The user should enter one of three parameters: - Tax ID - Vendor - Customer
Customer	Customer for which tax ID history should be displayed.	Required see Comment	Manual entry/picklist	The user should enter one of three parameters: - Tax ID - Vendor - Customer -BP
Business Partner	BP for which tax ID history should be displayed.	Required see Comment	Manual entry/picklist	

The displayed ALV list can be printed (Menu List> Print)

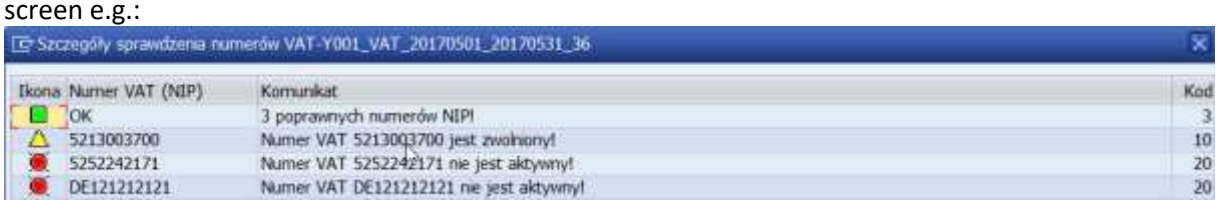
2.5 Integration between NIP Checker and JPK Transfer solution

NIP Checker solution integrates with JPK Transfer solution. From version 2.0 of JPK Transfer, NIP Checker software is installed with JPK Transfer in a package (NIP Checker could be installed separately). Important! Users with JPK Transfer license and without NIP Checker license can use NIP Checker only in restricted manner (only checking syntax of tax ID without connecting with external services).

By mentioned integration, additional icon appears on screen: „**Check Tax IDs”** (check XML icon was hidden because same operations can be done by „check XML and prepare”).:



Pressing „check tax IDs” icon causing checking tax ID for selected records on report. Result will be displayed as icon in column *tax ID*. Double click on that column takes user to summary of checking screen e.g.:



3. Usage of NIP Checker's API

NIP Checker shares application programming interface (API) by function modules:

Module	Parameter	Description
/BCC/JPN_API_VATNO_CHECK_ONE		Single tax ID's status check Usually parameter that is only shared is I_VATNO (optionally possible to pass I_USAGE – see bellowed description) E_RESULT – return structure E_FILENAME – output validation key E_LDATE, E_LTIME – log's date and time
Input parameters	I_VATNO	Tax ID to be checked (Polish tax ID or UE VAT number)
	I_INFO	Additional 40-character string that can describe record e.g: *Vendor no: 1234567890*
	I_COMPCODE	Company code (needed if service ID determination should be based on company code). See configuration parameter ID.
	I_USECACHE	Optional parameter. Tag which indicates cache usage (see configuration parameter in installation guide). If omitted, cache is in use ('X').
	I_FORCE_CACHE_VALID	Optional parameter. Forces cache validity to a given value that can be bigger by 31 days than standard one (can be 1000 – a month as well).
	I_TEST	Optional parameter. Tag that indicates checking's process in test mode (make use of BCC NIP Checker's gateway). If omitted, gateway in productive mode is in use.
	I_MODE	Optional parameter. Tag enables forcing processing mode. This mode usually is single established by configuration and this parameter should not be filled. Possible values (D,E,A,N)
	I_USAGE	Optional parameter. Three-characters ID (usage type) which enables distinction of function call's source. If not declared, default value GID is used. See description of I_USAGE parameter below.
	I_FILENAME	Optional parameter. Usually not in usage. It enables setting external key (ID) of checking process. If omitted, key is set automatically - consist of USAGE TYPE, DATE, TIME, USER and additional information. Return value of output parameter: E_FILENAME.
	I_NOLOG	Optional. This parameter should not be used when calling directly (it is used by /BCC/JPN_API_VATNO_CHECK_ONE_A.
Output parameters	E_RESULT	Return information about record that is already checked in structured format: VATNOF – VAT number in input format VATNO – VAT number validated without delimiter COUNTRY- country's prefix in case of VAT EU PL – indicates if VAT number is known as PL Tax ID EU- indicates if VAT number is known as VAT UE OT – indicates that VAT number is unknown as PL tax ID or VAT UE CODE – validation result code TECHDESC – technical code description DESC – checking result description FROMCACHE – is result gathered from CACHE CDATE – information when record checking was kept in CACHE CTIME – information when record from CACHE was checked
	E_FILENAME	It contains validation key. Validation key could be used to find logs and e.g. displays pop-up with information about log (see API module /BCC/JPN_API_LOG_POPUP)
	E_LDATE	Return log on date. Usage same as validation key.
	E_LTIME	Return logged time. Usage same as validation key.
/BCC/JPN_API_VATNO_CHECK_MANY		Checking status of numerous tax IDs (more efficient for larger quantity of tax IDs than calling single tax ID by CHECK_ONE). Parameters same as in CHECK_ONE but input data and results are displayed in table.
Input parameters		Same as /BCC/JPN_API_VATNO_CHECK_ONE but I_VATNO is a table that contains numerous VAT numbers, not single VAT number.
Output parameters		Same as /BCC/JPN_API_VATNO_CHECK_ONE but E_RESULT is a table that contains numerous results, not single result.

/BCC/JPN_API_LOG_POPUP		Display pop-up with information about executed checking (pop-up same as in transaction /BCC/JPN). Input parameters can base on output parameters from modules CHECK_ONE/CHECK_MANY Important! For displaying simple messages ,like contractor's master data validation, error code included in CHECK_ONE/CHECK_MANY in field DESC of E_RESULT table is usually sufficient.
Input parameters	I_ID	Optional: ID for the NIP Checker service (can be given or find out by the module)
	I_COMPCODE	Optional: Company code (needed if service ID determination should be based on company code). See configuration parameter ID.
	I_FILENAME	Validation key identifying log to be displayed
	I_LDATE	Log's date that identify log to be displayed (option)
	I_LTIME	Log's time that identify log to be displayed (option)
	I_TITLE	Title to be displayed in pop-up (if not defined, default value is gathered from I_FILENAME parameter).
/BCC/JPN_API_HISTORY_POPUP		Displays a popup window with single TAX ID checking history.
Input parameters	I_ID	Optional: ID for the NIP Checker service (can be given or find out by the module)
	I_COMPCODE	Optional: Company code (needed if service ID determination should be based on company code). See configuration parameter ID.
	I_VATNO	Tax ID for which the history will be displayed
	I_DATE_FR	Optional parameter. History date limit from.
	I_DATE_TO	Optional parameter. History date limit to.
	IT_USAGE	Optional parameter. If any values will be given in IT_USAGE table then this values will filter the USAGE (first 3 letters of FILENAME).
	I_TITLE	Optional parameter. If given will be used to display the text on the popup window toolbar.
/BCC/JPN_API_VATNO_CHECK_ONE_A		Single tax ID's status check with specified (limited) timeframe to wait for the result. The module calls checking asynchronously and waits given time (in milliseconds) for the result. If wait time is exceeded then NOT_FOUND exception is thrown. If CACHE is used e.g.. CACHE_VALIDITY = 0 (remember resut from the same day), then next call after a few seconds should return result almost immediately (<50 ms) The function modu is to be used in real time validations.
Input parameters	I_VATNO	Tax ID to be checked (Polish tax ID or UE VAT number)
	I_INFO	Additional 40-character string that can describe record e.g: *Vendor no: 1234567890*
	I_COMPCODE	Optional: Company code (needed if service ID determination should be based on company code). See configuration parameter ID.
	I_FORCE_CACHE_VALID	Optional parameter. Forces cache validity to a given value that can be bigger by 31 days than standard one (can be 1000 – a month as well).
	I_WAIT_MS	Wait time for the resultat in milliseconds
	I_TEST	Optional parameter. Tag that indicates checking's process in test mode (make use of BCC NIP Checker's gateway). If omitted, gateway in productive mode is in use.
	I_MODE	Optional parameter. Tag enables forcing processing mode. This mode usually is single established by configuration and this parameter should not be filled. Possible values (D,E,A,N)
	I_NOLOG	Optional parameter. Of used, then no log header is written when check is done (or header with SID usage is written). This parameter is used when preliminary checking Tax ID e.g. in validations without waiting.
Output parameters		Like /BCC/JPN_API_VATNO_CHECK_ONE
/BCC/JPN_API_CHECK_AUTH		Checks if the user is authorized for a given company code for NIP checks.
Input parameters	I_COMPCODE	Company code. See configuration parameters ID and USE_JPN_AUTH_OBJECT.

Output exeptions	CC_AUTHORITY_ERROR	Exception returned when user does not have enough authorizations.

Sometimes one would like to add *Usage type* (parameter I_USAGE) to distinguish records which are validated by API (in logs). For that reason it is necessary to add entry in /BCC/JPN_DB_USG table (transaction SM30 on development environment) that begins with “Z” letter and has only 3 UPPER-CASE letters.
EXAMPLE:
ZU1

It is not recommended to generate I_FILENAME parameter manually (it is recommended to left it empty during call and receive E_FILENAME parameter generated by system). If user wants to generate validation key externally, it has to be unique, easy to identify and consist of UPPER-CASE letters/ numbers and delimiters. It is good to include validated object number, DATE and time in mentioned validation key.
Example:
20170602_120345_ID_OBJECT

4. NIP Checker – user extensions

User extensions included in NIP Checker:

Type / Extension	Description
Extension of /BCC/JPN program and transaction EXIT area (additional selection for VAT IDs) INCLUDE `ZX_BCC_JPN_T001S` – screen parameters for EXIT area (see transaction code /BCC/JPN/) INCLUDE `ZX_BCC_JPN_T001` (see function module /BCC/JPN_OTH_UEXIT_T001)	This extension of transaction /BCC/JPN enables choosing tax IDs to be validated by custom ABAP code. In created INCLUDE `ZX_BCC_JPN_T001S` it is possible to add selection parameters in EXIT block of transaction screen /BCC/JPN for processing later in INCLUDE `ZX_BCC_JPN_T001`. In INCLUDE `ZX_BCC_JPN_T001` it is necessary to add logic that fills table: CT_VATNO type /BCC/JPN_TT_VATNO_INF
Extension of /BCC/JPN program and transaction ACTIONS area (additional actions after VAT checking) INCLUDE `ZX_BCC_JPN_T002S` – screen parameters for EXIT area (see transaction code /BCC/JPN/) INCLUDE `ZX_BCC_JPN_T002` (see transaction code /BCC/JPN/, INCLUDE)	This extension of transaction /BCC/JPN enables adding some additional actions after VAT checking. In created INCLUDE `ZX_BCC_JPN_T002S` it is possible to add selection parameters in ACTIONS block of transaction screen /BCC/JPN for processing later in INCLUDE `ZX_BCC_JPN_T002`. In INCLUDE `ZX_BCC_JPN_T002` it is necessary to add logic that executes the additional processing.
Extension to ignore checking of some TAX ID numbers INCLUDE `ZX_BCC_JPN_I001` `(see function module /BCC/JPN_OTH_UEXIT_I001)`	Allows exclude some TAX ID numbers from checking (note that some numbers cane be excluded via configuration as well).

Extension allowing changing ALV checks output list:
 	
Messages change (summary):
`ZX_BCC_JPN_M001`
`(Interface /BCC/JPN_OTH_UEXIT_MESS)`
 	
Message change (details and history)
`ZX_BCC_JPN_M002`
`(Interface /BCC/JPN_OTH_UEXIT_MESS_DET)`
	In these user exits it is possible to change the content of the tables with messages to be displayed to the user after filling them by standard procedures.

Extension to select TAX id for customer, vendor and business partner: ZX_BCC_JPN_TN4C, ZX_BCC_JPN_TN4V, ZX_BCC_JPN_TN4B And relevant function modules /BCC/JPN_OTH_UEXIT_TN4C, /BCC/JPN_OTH_UEXIT_TN4V, /BCC/JPN_OTH_UEXIT_TN4B.	With these user exits one can select TAX ID from master data of Customers (C), Vendors (V) and Business Partners (B).

5. NIP Checker configuration

NIP Checker configuration was described in installation guide:
(*NIP_Checker_InstallationManual_EN_data.pdf*)

6. Additional information

More information about NIP Checker could be found in installation guide (*NIP_Checker_InstallationManual_EN_data.pdf*) and *JPK by BCC forum*: https://jpk.bcc.com.pl