

Importing Configurations Using the Configuration Inspector Module

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Introduction

This document is intended for bank or processing centre employees responsible for WAY4 system setup. The document contains information about operations used to copy configurations (for example, of Products and separate Product components) from one data scheme to another using the Configuration Inspector module. This document describes data import. Functionality for exporting data using the Configuration Inspector module is provided according to an additional agreement with the WAY4 vendor.

While working with this document, it is recommended that users refer to the following reference material from the WAY4 documentation series:

- Products and Contract Subtypes
- WAY4™ Accounting Schemes
- WAY4™ Service Packages
- WAY4™ Global Parameters

The following conventions are used throughout this document:


- Field labels in screen forms are typed in *italics*.
- Button labels used in screen forms are placed in square brackets, such as [Approve].
- Menu selection sequences are shown with the use of arrows, such as Configuration Setup → Contract Types.
- Warnings of possible erroneous actions are marked with the  sign.
- Messages marked with the  sign contain information about important features, additional facilities, or the optimal use of certain functions of the system.

Chapter 1. General Information


The Configuration Inspector module is used to copy configurations to another data scheme (test or production one). This document contains a description of operations used to copy configurations of system objects, for example:


A configuration includes: business settings, system settings including financial institution hierarchy, Product settings, card issuing settings, global parameter settings, solution topology settings, etc.

- Products – when Product configurations are copied, the system performs comprehensive copying (configurations of all objects linked with the copied Products are copied).
- Objects linked with Products:
 - Accounting Schemes
 - Service Packages
 - Contract subtypes
 - Report types
 - Report templates
 - Risk schemes
 - Tariffs
 - Applet subtypes

 When copying Products, Event types, and contract sub-types their "Configuration Groups" classifier marking is kept.

Chapter 2. Preparation for Copying

 Before copying configurations, it is necessary to make a backup copy of the data scheme to be updated in the event unsolvable problems occur during data import into the scheme.

 It is recommended that the WAY4 system version installed on the source and target data schemes be the same. Otherwise, part of the data may be not copied or copied incorrectly.

Chapter 3. Data Import

1. To prepare for import of configurations, copy the configuration file intended for import to the <OWS_WORK>/Data/ directory of the data scheme being updated.



Configuration files for import are provided by the WAY4 vendor.

2. In the data scheme to be updated, start the data import pipe (Copy Configuration → Copy Configuration (Simple) → Import).
3. After import is completed, set up import parameters and perform import in the "Copy Configuration Import Screen" form of the data scheme to be updated (see Fig. 1) ("Copy Configuration → Copy Configuration (Simple) → Copy Configuration Import Screen").

Name	IDT	Record ID	Amendment Date	Tree Type	Posting Status
APPL_PRODUCT	CC_160331141635	36	31/03/16 14:30:30	CC_IMPORT	
DATE_SCHEME	CC_160331123544	34	31/03/16 12:55:56	CC_IMPORT	
ACC_SCHEME	CC_160330105244	13	30/03/16 11:06:02	CC_IMPORT	

Fig. 1. "Copy Configuration Import Screen" form



Attention! The [Merged List] and [Header Data] buttons are used to access auxiliary information and may only be used by the WAY4™ system vendor's specialists.

4. To view a configuration file, select the necessary record in the "Copy Configuration Import Screen" form, click the [Data...] button (see Fig. 1) and select "View Standard" from the context menu.

#	Name	Value	Status
6	Account Type	CI Deposit Int	
14	Due Acc Templ	CI Deposit	
15	Due Period	3	
22	GL Number	001C-CR-USD-DEP-INT-840	

Fig. 2. Viewing a configuration file

The window for viewing a configuration file shows a tree of exported records. Executing the "View Details" context menu command shows detailed information for each record (similar to viewing detailed information in the "Copy Configuration Merge Tree" window, see Fig. 3).

5. Merge the imported configurations and the configurations of the target scheme by clicking the [Data...] button (see Fig. 1) and selecting "Merge with Standard" from the context menu.



The merge process may take a rather long time.

6. To view merge results, click the [Data...] button (see Fig. 1) and select "View Merge Result" from the context menu.

In the window that opens, thoroughly analyse the results by using the following notation and additional information in square brackets (corresponds to the status assigned to the parameter at the data merging step) (see Fig. 3):

- – the record must be deleted from the target scheme:
 - ◆ "Retain record" – extra record (the record will be saved in the target scheme).
 - ◆ "Remove record" – extra record (the record will be deleted in the target scheme).
- – the record contains updated values of insignificant parameters or the record's child records contain updated data:
 - ◆ "Change only subs" – subordinate records contain updated data.
 - ◆ "Skip change auto" – the record in the target scheme will not be changed.
 - ◆ "Skip change manually" – the record in the target scheme will not be changed (because "Skip Changes" is executed for this record).
- – the record must be added to the target scheme:
 - ◆ "New record" – new record.
- – the record contains updated data; the corresponding record in the target scheme will be updated:
 - ◆ "Change name field" – a field with the "Name" marker was changed for this record.
 - ◆ "Change basic field(s)" – fields with the "Basic" marker were changed for this record.
 - ◆ "Change parm field(s)" – fields with the "Parm" marker were changed for this record.

CC.Ext Data for Tree for ACC_TEMPL: CI Deposit Int

Record Name: CI Deposit Int

Status: Changed Basic Data

Table Code: ACC_TEMPL

Record ID: 8721040

Attributes Ref Node

#	Name	Value	Status
6	Account Type	CI Deposit Int	Unchanged
14	Due Acc Templ	CI Deposit	Unchanged
15	Due Period	3	Unchanged
22	GL Number	001C-CR-USD-DEP-INT-840	Unchanged

Ins Del **Query** Linked Data

Fig. 4. Viewing detailed information for each record

The "CC.Ext Data for Tree for <table name>:<table record>" form shows basic information about a record:

- *Record Name* – name of the record in the table.
- *Status* – status assigned to the parameter when merging data.
 - ◆ "New record" – new record.
 - ◆ "Unchanged" – the record does not change.
 - ◆ "Skip Changes" – the record in the target scheme will not be changed (as the "Skip Changes" command will be automatically or manually executed for this record).
 - ◆ "To remove (Extra Record)" – extra record (the record will be deleted in the target scheme).
 - ◆ "Extra Record" – extra record (the record will be saved in the target scheme).
 - ◆ "Sub Changed" – parameter records of this record contain updated data.
 - ◆ "Changed" – the record contains updated data.
 - ◆ "Changed Basic Data" – fields with the "Basic" marker have been changed for this record.
 - ◆ "Changed Names" – fields with the "Names" marker have been changed for this record.
 - ◆ "Changed Parm" – fields with the "Parm" marker have been changed for this record.



In this module, fields of records in database tables can have the following markers: "Code" – identification field marker; "Name" – name

field; "Parm" – numeric parameter; "Basic" – all other fields (fields with references to other tables, fields with drop-down lists, date fields, comment fields).

- *Table Code* – name of the database table that contains this record.
- *ID* – record ID.

 **Attention!** The [Ref Node] button is intended for use by WAY4™ vendor employees only.


The grid form of the "Attributes..." child form that opens when the [Attributes] button is clicked (see Fig. 4) shows a list of record parameters (fields):

- *#* – parameter identifier.
- *Name* – parameter name.
- *Value* – parameter value.
- *Status* – status assigned to the parameter at the data merging stage:
 - ◆ "Unchanged" – the parameter record does not change.
 - ◆ "Current" and "Imported" – these statuses are used in pairs if a parameter record changes. In this case, the form displays two records for the given parameter with one ID (the # field): the imported and current record in the target scheme. The imported parameter record is assigned the "Imported" value, and the current parameter record in the target scheme is assigned the "Current" value.


The [Linked Data] button of the "Attributes..." form is used to open a form containing linked data from other tables. For example, the parameter *Name*= "Account Type", *Value*= "Cl Deposit Int" is linked with the record "Cl Deposit Int" in the ACCOUNT_TYPES table. The parameters of a linked record can be viewed using the [Attributes] button.


The "Skip Changes" context menu command (see Fig. 3) leaves the corresponding record in the target scheme unchanged when data are imported.

The "Force Changes" command (see Fig. 3) makes it possible to forcibly change the corresponding record in the target scheme when data are imported.

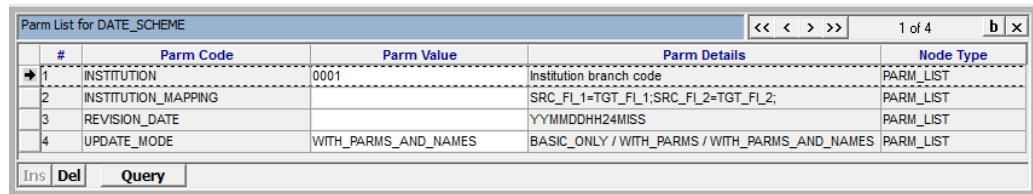
 **Attention!** Careless use of the "Skip Changes" and "Force Changes" commands may result in inoperability of imported configurations.

7. For data analysis, the module provides the possibility to export the results of merging imported configurations with target scheme configurations. Results of merging can be exported by clicking the [Data...] button in the "Copy Configuration Import Screen" form (see Fig. 1) and selecting the "Export Merge Results" value in the context menu. A file with merge results has the "MERGE" postfix and is exported to the <OWS_WORK>/Data/ directory (default directory).

 Import of merging results using the "Import Merged Data" menu item is an activity applying changes in the target system, that is executed at the end of the import procedure, see step 12. When this menu item is executed, data in working configuration tables in the target scheme will be updated.

 **Important!!!** It is not possible to reverse the consequences of applying merge results and return the target schema to the original state.

8. Import parameters are set up in the "Parm List for <name of configuration file>" form (see Fig. 5), opened by clicking the [Parm List] button in the "Copy Configuration Import Screen" form (see Fig. 1).



#	Parm Code	Parm Value	Parm Details	Node Type
1	INSTITUTION	0001	Institution branch code	PARM_LIST
2	INSTITUTION_MAPPING		SRC_FL_1=TGT_FL_1;SRC_FL_2=TGT_FL_2;	PARM_LIST
3	REVISION_DATE		YYMMDDHH24MISS	PARM_LIST
4	UPDATE_MODE	WITH_PARMS_AND_NAMES	BASIC_ONLY / WITH_PARMS / WITH_PARMS_AND_NAMES	PARM_LIST

Fig. 5. "Parm List for <name of configuration file>" form


The following parameters are specified in this form at the import step:

- Set up copy mode. To do so, set the appropriate value for the UPDATE_MODE parameter. This parameter makes it possible to configure the mode for copying table fields with various markers ("Parm", "Name", etc.). Possible values:
 - ◆ "WITH_PARMS_AND_NAMES" – this value assumes update of all table fields.
 - ◆ "BASIC_ONLY" – during import only fields with the "Basic Data" type are updated (reference fields to other tables, fields with drop-down lists, date fields, comment fields. This value is reserved for internal use.
 - ◆ "WITH_PARMS" – during import only numeric parameters are imported. This value is reserved for internal use.
- INSTITUTION parameter – identifier (*Branch Code* field value) of the target financial institution to which data are being imported. By default, the value of this parameter corresponds to the value of the INSTITUTION parameter set when exporting data. I.e. by default (when the value of the INSTITUTION_MAPPING parameter is empty) data are copied to the financial institution with the same Branch Code as that of the financial institution from which the data are being copied.

The target institution can be redefined using the INSTITUTION_MAPPING parameter, in this case, the value of the INSTITUTION parameter should also be redefined (see the description of the INSTITUTION_MAPPING below).

- The INSTITUTION_MAPPING parameter is used to configure the correspondence between the financial institution that is the source of data and the financial institution that is the target of data when financial institution identifiers (Branch code) do not match – this parameter makes it possible to import data to another financial institution. The parameter

value is specified in the format <source financial institution Branch Code>=<target financial institution Branch Code>.

 To correctly change the prefixes of settings being imported, in the INSTITUTION field specify the target institution redefined using the INSTITUTION_MAPPING parameter. For example, when importing data from a financial institution with Branch Code=0001 to a financial institution with Branch Code=0002, specify the value "0002" in the INSTITUTION field. The name of the Accounting Scheme will be changed from 0001-Issuing to 0002-Issuing.

- The REVISION_DATE parameter is used to specify a revision date. The parameter value is specified in the format "YYMMDDHH24MISS"; e.g. "160331121500" is specified for 12:15:00 31.03.2016. If the parameter is set, when merging imported configurations with target scheme configurations, the parameter value is compared with the date the record being imported was created or changed. The result of this comparison is added to the record's status in square brackets (see Fig. 6):
 - ◆ "Target updated after revision" – shown for "Change parm field(s)", "Change name field" and "Change only subs" records if the date of creating or changing the record being imported is greater than the date specified in the REVISION_DATE parameter.
 - ◆ "Removed from target after revision" – shown for "Remove record" and "Retain record" subordinate records if the date of creating or changing the record being imported is greater than the date specified in the REVISION_DATE parameter.
 - ◆ "Added in target after revision" – shown for "New record" records if the date of creating or changing the record being imported is less than the date specified in the REVISION_DATE parameter.

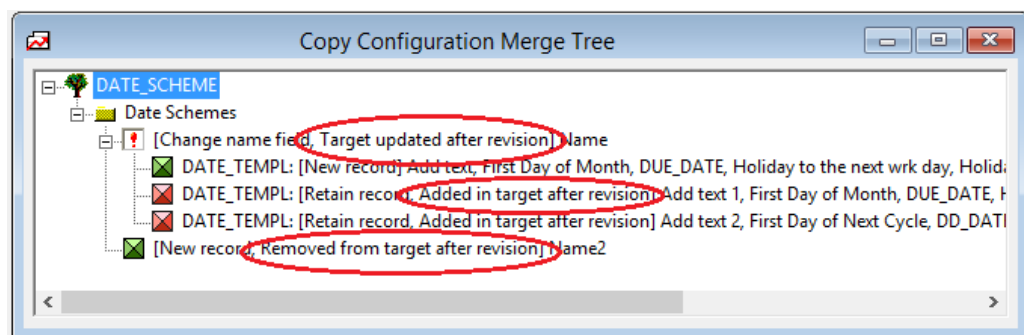


Fig. 6. Merge results when the REVISION_DATE parameter is set

9. Clicking the [Base Data] button opens the "Base Data" form showing data filtering conditions that were specified in the export step.
10. Clicking the [Exc: Tables] button opens the "Exc: Tables for <configuration file name>" form showing conditions for filtering data for linked tables. These conditions were specified in the export step. The table name is specified in the *Table Code* field and the rule applied to this table is specified in the *Rule (Empty = Skip)* field.

11. To view imported records in the form of a list, click the [Src List] button in the "Copy Configuration Import Screen" form (see Fig. 1). The "Src List for <name of configuration file>" form will open (see Fig. 7):

- Clicking the [Data] button in the "Src List for <name of configuration file>" form opens a form with a list of subordinate records. For lower-level records, clicking the [Data] button opens a form with the record's main parameters (this form is identical to the "Attributes for..." form, see Fig. 4).
- Clicking the [Field List] button in the "Src List for <name of configuration file>" form opens a form with technical information about record fields (see Fig. 7).


#	Field Code	Field Details	Field Type	Node Path
10	BALANCE_TYPE	(N18) Basic -> BALANCE_TYPE Name=Balance Type	Basic	EXPORT_DATA_GROUP_ACC_TEMPL BALANCE_TYPE
11	CALC_WHEN_CREDIT	(S1) Basic LIST_BOX Name=Calc When Credit	Basic	EXPORT_DATA_GROUP_ACC_TEMPL CALC_WHEN_CREDIT
12	CHARGE_FOR_OPEN	(N18) Basic -> TRANS_TYPE => ACCOUNT_TYPE_ID(ACCOUNT_TYPE.CHARGE_FOR_OPEN) Na	Basic	EXPORT_DATA_GROUP_ACC_TEMPL CHARGE_FOR_OPEN
13	CODE	(S32) Code => ACCOUNT_TYPE_ID(ACCOUNT_TYPE.CODE) Name=Code	Code	EXPORT_DATA_GROUP_ACC_TEMPL CODE
14	CURR	(S3) Code -> CURRENCY(CODE) => ACC_SCHEME_OID(ACC_SCHEME.CURR) Name=Currency	Code	EXPORT_DATA_GROUP_ACC_TEMPL CURR
15	DUE_ACC_TEMPL	(N18) Basic -> ACC_TEMPL Name=Due Acc Templ	Basic	EXPORT_DATA_GROUP_ACC_TEMPL DUE_ACC_TEMPL
16	DUE_PERIOD	(N3 = 0) Parameter Name=Due Period	Parm	EXPORT_DATA_GROUP_ACC_TEMPL DUE_PERIOD
17	DUE_TO_WORK_DAY	(S1) Basic LIST_BOX Name=Due To Work Day	Basic	EXPORT_DATA_GROUP_ACC_TEMPL DUE_TO_WORK_DAY
18	DUE_TYPE	(S1) Basic LIST_BOX => ACCOUNT_TYPE_ID(ACCOUNT_TYPE.DUE_TYPE) Name=Due Type	Basic	EXPORT_DATA_GROUP_ACC_TEMPL DUE_TYPE
19	EVENT_TYPE	(N18) Basic -> EVENT_TYPE Name=Event Type	Basic	EXPORT_DATA_GROUP_ACC_TEMPL EVENT_TYPE
20	F_I	(N18) Basic -> F_I => ACC_SCHEME_OID(ACC_SCHEME.F_I) Name=Fin Institution	Basic	EXPORT_DATA_GROUP_ACC_TEMPL F_I

Fig. 7. "Field list for Src List for <name of configuration file>" form



The "Field list for..." form contains the *Field Type* field - field type (*Basic*, *Code*, *Name*, *Parameter*, *Other*). At the import stage, a record is searched for in the source scheme's table and matched with the record being imported according to record field types:

- The search is made by fields with the "Code", "Name", and "Basic" types. Fields with the "Parameter" and "Other" types are not used for merging.
 - ♦ "Code" – identification field marker.
 - ♦ "Name" – name field.
 - ♦ "Basic" – all other fields (fields referring to other tables, fields with drop-down lists, date fields, comment fields).
 - ♦ "Parm" – numeric parameter.
 - ♦ "Other" – this value is used for fields not participating in the process of searching for and merging records.
- The search is looped. First an attempt is made to "fully merge" records (the values in a "Code" type field are checked for matching; then in fields with the "Name" and "Basic" types; if the check is successful, the record is considered to have been found). Each consecutive cycle contains less rigorous merging conditions, which increases the risk that record duplicates will appear.

 The field for the internal unique identifier of the record in tables (Record ID) is not exported. In all configuration tables, the "Code" type field acts as the default identification field(s). Note that if a record identifier ("Code" type field) is unique, the record will be searched for and matched unambiguously. If the identifier is not unique, the risk of record duplicates appearing is increased.

Types of fields for a specific table are hardcoded. A record may have several fields of the same type. All fields of the same type are analysed in a search.

12. Table fields that should or should not be imported can be specified in the "Exc Fld Types for <configuration file name>" form opened by clicking the [Exc Fld Types] button (see Fig. 8).

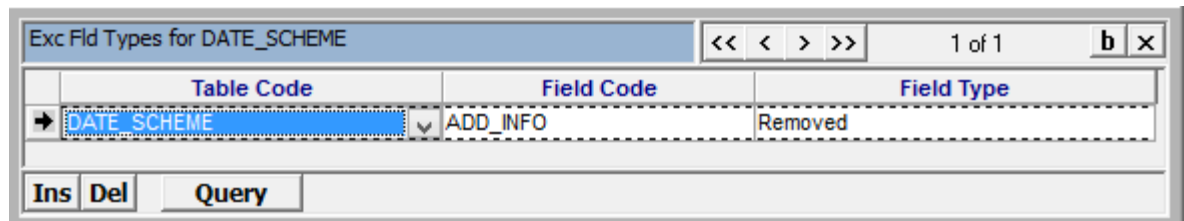



Table Code	Field Code	Field Type
DATE_SCHEME	ADD_INFO	Removed

Ins Del Query


Fig. 8. "Exc Fld Types for <configuration file name>" form


A table name is specified in the *Table Code* field and a field name in the *Field Code* field. In the *Field Type* field, select the rule applied to this field:

- "Skip" – do not import this field.
- "Removed" – delete the field.
- "Name", "Code", "Parameter", "Basic", "Other" – these values specified for fields being imported are used to set the type of field with the field will be imported.

 For example, if some fields in a table are missing in an updated schema (were deleted when the data schema was updated), to be able to import configuration data, these fields must be added to the "Exc Fld Types for <configuration file name>" form with a *Field Type* value of "Removed".

13. After data is merged and import parameters are set up, the import procedure is performed. To start import, click the [Data...] button (see Fig. 1) and select "Import Merged Data" from the context menu.

 The import process may take a rather long time.

 After executing the [Data...] → "Import Merged Data" command, new configuration data are imported into the target schema. It is not possible to return to original configuration data after this stage of import is completed.

14. After the import procedure is completed, it is necessary to view process log records (Copy Configuration → Copy Configuration (Simple) → Process Log) corresponding to the configuration import. To access messages generated by the system during the process (including error messages), click the [Messages] button in the "Process Log" form.

15. If it is necessary to delete a configuration file record, click the [Data...] button (see Fig. 1) and select "Remove Data (!!!! NO RESTORE)" from the context menu. In the prompt window that opens, click [OK] to confirm deletion.





Deleted configuration file records cannot be restored.

Chapter 4. Preparing Copied Data for System Operation

After configurations are imported, it is necessary to activate all copied components:

1. After import, imported records that contain the *Is Ready* field are inactive (the *Is Ready* field is set to the "Not Ready" value). The *Is Ready* field shows whether a new record or changes made to a record have been approved.
2. For the record approval procedure, see sections "Approving Products", "Accounting Scheme Approval", "Approving Service Packages", "WAY4™ Service Packages", "Tariff Numeric Values" etc. in the corresponding manuals: Products and Contract Subtypes, WAY4™ Accounting Schemes, "WAY4™ Service Packages", "WAY4™ Advanced Tariff Management".
 - During approval of changes, the system automatically checks record parameters. If errors are detected during parameter check, the corresponding message is displayed on the screen. For information about errors, see the process log.
 - After a record is successfully approved, a message informing users that changes have been registered in the database is displayed on the screen, and the *Is Ready* field is set to the "Ready" value.

 The WAY4 Tariffs module is not included in the basic WAY4 configuration and is supplied under a separate agreement with the WAY4 system vendor.

 If multiple problems occur during approval of copied records, restore the data scheme from a backup copy created before.