



## Installation and Configuration Manual

# XML Applications (R2)

03.50.30

21.07.2020

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This document is intended for Way4™ system administrators, bank or processing center employees who are responsible for the operation of the Advanced Applications R2 module and batch processing of applications in the issuing and acquiring modules. The document contains information about applications XML format, pipe parameters for application processing, and the basic rules for entering and processing applications.

When working with this document, it is recommended to use the following resources from the OpenWay documentation series:

- "DB Manager Manual"
- "Products and Contract Subtypes"
- "Form Builder"
- "Dictionaries"
- "Issuing Module. Operation Manual"
- "Acquiring Module. User Manual"
- "WAY4™ Advanced Tariff Management"
- "Client and Contract Classifiers".

The following notation is used in the document:

- Field labels in screen forms are shown in *italics*.
- Key combinations are shown in angular brackets, for example, <Ctrl>+<F3>.
- Names of screen form buttons and tabs are shown in square brackets, for example, [Approve].
- Sequences for selecting user menu items or context menu items are shown using arrows as follows: "Issuing → Contracts Input & Update".
- Sequences for selecting system menu items are shown using arrows as follows: Database => Change password.
- Variables that differ for each local instance, such as directory and file names, as well as file paths are shown in angular brackets, as in <OWS\_HOME>.

Warnings and information are marked as follows:



Warnings about potentially hazardous situations or actions.



Messages with information about important features, additional options, or the best use of certain system functions.

# 1. Overview

The Advanced Applications module supports the following:

- Importing XML format applications for creating new clients and contracts (issuing and acquiring), issuing new cards, and editing contract properties and client records in the database.
- Importing XML files with an update on issuing module applications that have been already loaded.
- Exporting XML report on processing applications that were loaded in XML format.
- Exporting XML report on processing applications that were loaded in XML format, and applications that were created by manually entering data in DB Manager.
- Exporting issuing module XML applications.

In the Advanced Applications module, the following menu groups are used to work with XML applications:

- "Advanced Applications R2 → Application Processing" – for "workflow" mode.
- "Advanced Applications R2 → Applications No Workflow" – for "no workflow" mode.

A description of "workflow" and "no workflow" modes is given in the section "[Application Workflow Modes](#)".



The Advanced Applications module is not included in the basic configuration of Way4 and is provided according to an additional agreement with OpenWay.

Certain features for working with XML applications are available in the Way4 basic configuration.

The issuing and acquiring modules support the following features:

- Importing XML format applications for creating new clients and contracts (issuing and acquiring), issuing new cards, and editing contract properties and client records in the database.
- Exporting XML report on processing applications that were loaded in XML format.

In the issuing module, the "Issuing → Applications Batch Interface" menu group is used to work with XML applications.

In the acquiring module, the "Acquiring → Applications Batch Interface" menu group is used to work with XML applications.

XML applications and XML reports are imported and exported using pipes:

- The "XML Applications Import" pipe is used to import applications. Pipe parameters are described in the section "[XML Applications Import](#)" [Pipe Parameters](#)", for a description of application import, see "[Importing Applications](#)".
- The "XML Applications Response" pipe is used to export a report on processing applications and errors in their processing. Pipe parameters are described in the section "[XML Applications Response](#)" [Pipe Parameters](#)", for a description of report export, see "[Exporting XML Response Files](#)".
- The "XML Applications Overall Response" pipe is used to export information about applications that were imported by the "XML Applications Import" pipe and applications that were created by manually entering data in DB Manager. Pipe parameters are described in the section "[XML Applications Overall Response](#)" [Pipe Parameters](#)", for a description of report export, see "[Exporting XML Response Files](#)".
- The "XML Applications Renew" pipe is used to update issuing module applications when the system receives a newer version of an application already existing in the system. Pipe parameters are described in the section "[XML Applications Renew](#)" [Pipe Parameters](#)", for a description of updating the issuing module applications, see the section "Updating Issuing Module Applications" of the document "Advanced Applications R2".
- The "XML Applications Export" pipe is used to export issuing module XML applications. Pipe parameters are described in the section "[XML Applications Export](#)" [Pipe Parameters](#)", for a description of exporting the issuing module applications, see the section "Exporting Applications" of the document "Advanced Applications R2".



The "XML Applications Overall Response", "XML Applications Renew", and "XML Applications Export" pipes are only available when the Advanced Applications module is used.

When setting up interaction between the Advanced Applications module, or issuing module, or acquiring module and an external system, it is recommended to check whether the incoming files format is as described in the related XSD schema.

To do so it is possible to use XmlPad (<https://xmlpad-mobile.com/>), for example.

When making a check, specify the required XSD schema from the appropriate HOME directory:

- For XML application format version 1.0 – \client\shared\pipes\dtd\Appl\_lib.xsd.

- For XML application format version 2.0 – \client\shared\pipes\xsd\offline\WAY4ApplFile.xsd.



## 2. Pipe Parameters

Pipe parameters set how the pipe operates. Parameters are specified in settings of the menu subitem for the client application used to call the pipe.

### 2.1 "XML Applications Import" Pipe Parameters

Parameter	Values	Parameter description
INPUT_FORMAT	UFX/ Application	Makes it possible to define the format of an incoming file. Files in the wrong format will be rejected and put in the corresponding directory. The associated record will be added to the Process Log. No response file is created for files in the wrong format.
BRANCH_ID_TYPE	BRANCH/ BANK/ CB	Default method for identifying the financial institution. When the "BRANCH" value is specified, identification is made according to the value of the Branch Code field (this is the default value), "BANK" – identification is made according to the value of the Bank_Code field, "CB" – according to the CB_Code value.
PRODUCT_GROUP		Product group code. Codes are set in the <i>Code</i> field of the "Full → Configuration Setup → Products → Product Definition → Product Groups" table.

Parameter	Values	Parameter description
FILE_NAME_PREFIX	Character	<p>Prefix in an incoming file name. The prefix must contain 7 characters (i.e. comply with the length of the standard "xadvapl" prefix).</p> <p>The default value is "xadvapl".</p>
FILE_CODING		<p>File encoding allowed for XML files, for example:</p> <p>"utf-8" (default value)</p> <p>"windows-1251".</p>
RESP_NAME_PREFIX	Character	<p>Prefix in the name of the outgoing response file.</p> <p>The default value is "R".</p>
DEFERRED_RESPONSE	Y/N	<p>Deferred generation of a response file.</p> <p>The default value is "N".</p>
DEFERRED_PROCESSING	Y/N	<p>Deferred processing mode.</p> <p>When the parameter is set to "Y", during import applications are only loaded, any application workflow activities, including application checking, are not performed.</p> <p>The default value is "N".</p>

Parameter	Values	Parameter description
ERROR_DIR	String	Specifies the error file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/Err".
OUTPUT_DIR	String	Specifies the response file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/Out".
PROCESSED_DIR	String	Specifies the processed file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/Arch".
SOURCE_DIR	String	Specifies the incoming file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/In".
GEN_POSIT_RESP	NO/WARN	Depending on the result of application processing, determines whether to generate a response file. If the value of this parameter is "N", a response file will only be generated if an error occurs. When the parameter value is "WARN", a response file will be generated if an error or warning occurs.
RESP_FOR_DUPL_FILES	Y/N	If this parameter is set to "Y" when an attempt is made to import an already imported file, a response file will be created with a message that the file is already imported. The file being imported will be put in the error file directory.  The default value is "N". In this case, a response file is not generated, the file being imported remains in the incoming file directory and an error message is generated when import is repeated.

Parameter	Values	Parameter description
RESPONSE_FOR_HEADER_ERRORS	Y/N	If this parameter is set to "Y", a response file will be generated even when formatting errors occur.  The default value is "N".
SOURCE_SYSTEM	String	This parameter is optional.  The value of this parameter is used to determine the workflow strategy.
SILENT	Y/N	This parameter determines whether parameter values will be requested from the user during pipe operation and whether a final window with a report on pipe operation results will be opened.  The default value is "N".
OLD_FILE_NAME	Y/N	If this parameter is set to "Y", simple file name format will be used.  The "N" value is used for working with expanded file name format.  The default value is "N".
NO_WF_SUPPORT	Y/N	Enables the "no workflow" mode.  The default value is "N". If this parameter is set to "Y", the "no workflow" mode is enabled. Processed applications are moved to the "NO_WF" stage.

Parameter	Values	Parameter description
APPL_ERROR_NOT_FATAL	Y/N	<p>If this parameter is set to "Y", the import procedure will not be aborted if an application containing an error is found. Otherwise (when the parameter value is "N") the import procedure is aborted.</p> <p>The parameter's default value is "N".</p>
USE_ORIGINAL_REG_NUMBER	Y/N	<p>When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application.</p> <p>The default value of the parameter is "N" (the number of the original application is not used).</p>



The contents of information being exported can be additionally specified for the Balance and ClientAddInfo/ContractAddInfo parameters. If it is necessary to do so, please contact OpenWay.

## 2.2 "XML Applications Response" Pipe Parameters

Parameter	Values	Parameter description
ADVAPPL2	Y/N	If this parameter is set to "Y", the pipe will be switched to "Advanced Applications R2" mode.

Parameter	Values	Parameter description
FILE_TYPE	String	Response file type. By default, "ADV Applications".
FILTER	Expression	<p>Additional filter in the FILE_INFO table. Examples:</p> <p>"ID=1650" – filter application files by ID</p> <p>"RECEIVED_BY = 22" – filter application files imported by a specific user</p> <p>"PARMS LIKE '0001%'" – filter application files by file sender code</p> <p>"REC_FILE_NAME LIKE '000100/A%'" – filter application files by file name.</p>
FILE_CODING		<p>File encoding allowed for XML files, for example:</p> <p>"utf-8" (default value)</p> <p>"windows-1251".</p>
RESP_NAME_PREFIX	Character	<p>Prefix in the response file name.</p> <p>The default value is "R".</p>
ADD_XML_HEADER	Y/N	<p>If this parameter is set to "Y", the XML prefix will be added before the FileHeader aggregate of the response file.</p> <p>The parameter's default value is "Y".</p>

Parameter	Values	Parameter description
PRETTY_PRINTED	Y/N	<p>If this parameter is set to "Y", the file is formatted according to XML structure.</p> <p>The default value is "N".</p>
EXTENDED_CLIENT_INFO	Y/N	<p>If this parameter is set to "Y", the response file will contain extended client information if the incoming file contained this information.</p> <p>The default value of the parameter is "N" (only for XML format version 1.0. For XML format version 2.0, the <a href="#">RESULT_DTLS</a> parameter is used).</p>
EXTENDED_CONTRACT_INFO	Y/N	<p>If this parameter is set to "Y", the response file will contain extended contract information if the incoming file contained this information.</p> <p>The default value of the parameter is "N" (only for XML format version 1.0. For XML format version 2.0, the <a href="#">RESULT_DTLS</a> parameter is used).</p>
OLD_RESPONSE_CODES	Y/N	<p>If this parameter is set to "Y", the old numeric error codes will be used.</p> <p>The default value is "N".</p>
VALIDATE_FILE	Y/N	<p>If this parameter is set to "Y" (default value), the file will be checked for compliance with the XSD schema.</p>

Parameter	Values	Parameter description
OUTPUT_FORMAT	UFY/IFX	<p>The value of this parameter determines the version of the XML application format for the file being exported.</p> <p>"UFY" – version 2.0 (default value)</p> <p>"IFX" – version 1.0.</p>
RESULT_DTLS		<p>This parameter determines the volume of additional information provided in the file being exported. For example, if the parameter is set to "RESULT_DTLS=Client=IDT;Contract=IDT;", only information on client and contract identifiers will be exported in the outgoing file. More detailed information about this parameter is provided at the end of the current section.</p>
GEN_POSIT_RESP	ALL/WARN/NO	<p>This parameter determines what information will be included in the response file. If the "ALL" value is specified, all information will be included. If the "NO" value is specified, for a successfully processed application only application status will be included. If the "WARN" value is specified, all information about an application processed with warnings will be included.</p> <p>The default value is "ALL".</p>
SHORT_DEFERRED_RESPONSE	Y/N	<p>The parameter determines if application data will be included in the response file or if only ErrorText/ ErrorCode will be included for the application.</p> <p>The default value is "N".</p>



Parameter	Values	Parameter description
APPL_INFO_IF_DECLINED	STATUS_INFO/ OBJECT_INFO/ FULL_INFO	This parameter determines what information will be included in the response file if the application is declined.
MASK_CONTRACT_NUMBER	Y/N	This parameter determines whether contract numbers will be masked in the response file.  The default value is "N".
UFX_VERSION	String	Parameter that specifies the UFX version used. The value is set in "X.X.XX" format. The default value corresponds to the newest version.
USE_ORIGINAL_REG_NUMBER	Y/N	When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application.  The default value is "N" (the number of the original application is not used).
EXPORT_DATA_DIRECTORY		This parameter specifies the path to the directory for storing response files.
EXCLUDE_CARD_APPLETS	Y/N	This parameter determines whether card applet information should be included in a response file.  For card applet information to be added, the parameter value must be "N" and the <a href="#">RESULT_DTLS</a> parameter must contain "Children=Y;".

For the "XML Applications Response" pipe, it is possible to specify which information about objects related to a client/contract (for which the application is intended) should be included in a report. The RESULT\_DTLS parameter is used to do so. This parameter's values are specified in the properties of the menu item used to start the "XML Applications Response" pipe.

For applications to work with client records, information can be exported about the following linked objects:

- Address – related addresses.
- ClientAddInfo – additional custom information for a client record.
- AffiliationClientInfo – information about related clients.
- ClientAuthMethod – authentication scheme parameters.
- ClientClassifier – client classifiers.
- AmndInfo – information about the user who made the last changes to the client record and the date on which they were made.
- FinancialInst – financial institution in which the client is registered.
- ClientCounterparty – payment participants related to the client.

For applications to work with contract, information can be exported about the following parameters or related objects:

- Client – client for which the contract is registered.
- Status – contract status.
- Usage – contract usage limiters.
- Order – standing payment orders for the contract.
- Address – related addresses.
- ContractAddInfo – additional information for a client record.
- AffiliationClientInfo – information about related clients.
- Balance – contract balance.
- Billing – contract billing cycles.
- TariffDomains – active tariff domain for a contract.
- ContractAuthMethod – authentication scheme parameters.
- ContractClassifier – contract classifiers.
- Card – cards issued for a card contract.
- AccessInfo – information about the number of unsuccessful PIN attempts (maximum and current).
- AmndInfo – information about the user who made the last changes to the contract and the date on which they were made.
- FinancialInst – financial institution in which the contract is registered.
- BIC – BIC (Bank Identification Code) of the financial institution in which the contract is registered.

- ServiceProfile – information about contract Services.
- Preferred – preferred counterparties for a contract.
- ContractDeviceInfo – device information; includes information about DeviceRecord and DeviceDocParms application objects.
- ContractCounterparty – information about the contracts related to a client of payment participants.

The mode for exporting a particular type of additional information can be enabled by defining the RESULT\_DTLS parameter value as a list of objects and parameters for which information should be exported in the following format: "<Object/parameter name>=Y" (the ";" character is used as a delimiter).



The contents of information being exported can be additionally specified for the Balance and ClientAddInfo/ContractAddInfo parameters. If it is necessary to do so, please contact OpenWay.

The "XML Applications Response" pipe also allows export of information about contracts related (main/sub, related contract, liability) to the contract for which the application is being processed. To do so, the following values are used:

- Parent=Y – enables export of higher-ranking contracts.
- ParentDepth=m – restriction on the depth shown for the tree of higher-ranking contracts, where "m" is a number.
- Children=Y – enables export of subcontracts.
- ChildrenDepth=m – restriction on the depth shown for the subcontract tree.
- RelatedContract=Y – enables export of related contracts (Related Cards).

It is possible to additionally manage export of information for related contracts. To do so, a combination of the names of related objects or parameters (Client, Status, Usage, etc.) is used with the prefixes of the related contract types:

- ParentContract (higher-ranking in the contract hierarchy). This prefix is considered if the "ExtendedContractInfo=Y" value is additionally set.
- SubContract (subcontracts)
- RelatedContract (related contracts, Related Cards).

The "OriginalApplication=Y" value makes it possible to include data from the original application in the response file created.

For clients and contracts it is possible to specify the values of "Client=IDT" and "Contract=IDT", allowing only information for client and contract identifiers to be included in an outgoing file.

## 2.3 "XML Applications Export" Pipe Parameters

Parameter	Values	Parameter description
FILTER	Expression	Additional filter. Filtering is according to the ADV_APPL table.
FILE_CODING		File encoding allowed for XML files, for example:  "utf-8" (default value)  "windows-1251".
STAGE		Code of the workflow stage after which an application is exported.  After application export, the "Export Application" activity (exists in the standard configuration) will be performed. Applications are moved to the next workflow step according to a rule specified in the settings of this activity in a strategy.  The default value – 'EXPORT' (must be specified in single quotes) enables application export from the "Export" step.
SORT_BY		List of the ADV_APPL table column headings by which applications will be sorted in the file. Headings are comma-delimited.  The default value is "APPL_REG_NUMBER".

Parameter	Values	Parameter description
APPL_IN_FILE	Number	Maximum number of applications in one file.  The default value is "10".
MASK_CONTRACT_NUMBER	Y/N	This parameter determines whether contract numbers will be masked in the response file.  The default value is "N".
POSTING_STATUS_FILTER	Expression	Additional filtering by the POSTING_STATUS field. Filtering is according to the ADV_APPL table.
RESP_FILE_PREFIX	Character	Prefix in the response file name. The prefix must contain 7 characters (i.e. correspond to the length of the standard prefix "XADVAPL").  The default value is "XADVAPL".
PRETTY_PRINTED	Y/N	The parameter determines whether the file will be formatted according to XML structure.  The default value is "Y".
VALIDATE_FILE	Y/N	The parameter determines whether the file will be checked for compliance with the XSD schema.  The default value is "Y".

Parameter	Values	Parameter description
FI_CODE		<p>Mandatory parameter.</p> <p>Branch Code of the financial institution whose applications are being exported. Specified in single quotes, for example '0001'.</p>
SENDER_CODE		<p>Mandatory parameter.</p> <p>Sender code value, which is specified in the file name, in the Sender field of the FileHeader aggregate, and in the name of the subdirectory "Data/Rbs/Out/&lt;...&gt;" where exported files are placed.</p>
FILE_TYPE	Expression	<p>Value specified for exported files in the FILE_TYPE field of the FILE_INFO table.</p> <p>The default value of the parameter is "ADV Applications".</p>
NO_WF_SUPPORT	Y/N	<p>Enables the "no workflow" mode.</p> <p>The default value is "N" (export of applications from a specific Advanced Applications workflow step that is set using the <a href="#">STAGE</a> parameter).</p> <p>The "Y" value of the parameter is used when it is necessary to export an application in "no workflow" mode.</p>
EXPORT_DATA_DIRECTORY		<p>Mandatory parameter.</p> <p>This parameter specifies the path to the directory used to store exported files.</p>

Parameter	Values	Parameter description
XML_SCHEMA_URL		This parameter determines the path to the XSD schema's WAY4ApplFile.xsd file.
SILENT	Y/N	This parameter determines whether the final screen of a report on pipe operation results will open.  The default value is "N".
TRANSFORM_FILE		This parameter is used to specify xslt-transformation of an exported file.



The "XML Applications Export" pipe only supports the extended filename format.

## 2.4 "XML Applications Overall Response" Pipe Parameters

Parameter	Values	Parameter description
FILTER	Expression	Additional filter for the ADV_APPL table. Example: "ACTION_TYPE='ADD'" – filter all applications to add objects.

Parameter	Values	Parameter description
ADD_XML_HEADER	Y/N	<p>If this parameter is set to "Y", the XML prefix will be added before the FileHeader aggregate of the response file.</p> <p>The parameter's default value is "Y".</p>
FILE_CODING		<p>File encoding allowed for XML files, for example:</p> <p>"utf-8" (default value)</p> <p>"windows-1251".</p>
PRETTY_PRINTED	Y/N	<p>If this parameter is set to "Y", the file is formatted according to XML structure.</p> <p>The default value is "N".</p>
RESP_NAME_PREFIX	String	<p>Prefix in the name of the outgoing response file; the default value is "RBD". On filename format, see "<a href="#">Format of outgoing files</a>".</p>
RESULT_DTLS	String	<p>This parameter determines the volume of additional information provided in the file being exported. For example, if the parameter is set to "RESULT_DTLS=Client=IDT;Contract=IDT;", only information on client and contract identifiers will be exported in the outgoing file. This is the default value.</p> <p>More detailed information about this parameter is provided at the end of the section "<a href="#">XML Applications Response</a>" <a href="#">Pipe Parameters</a>".</p>



Parameter	Values	Parameter description
MODE	RESPONSE/ RESPONSEWITHEXPORT	<p>This parameter determines the pipe operation mode. If the "RESPONSE" value is specified, the pipe will export only information about created objects; when the "RESPONSEWITHEXPORT" value is specified, the original application's data will be additionally exported.</p> <p>The default value is "RESPONSE".</p>
APPL_INFO_IF_DECLINED	STSTUS_INFO/ OBJECT_INFO/ FULL_INFO	<p>This parameter determines what information will be included in the response file if the application is declined.</p>
GEN_POSIT_RESP	ALL/WARN/NO	<p>This parameter determines what information will be included in the response file. If the "ALL" value is specified, all information will be included. If the "NO" value is specified, for a successfully processed application only application status will be included. If the "WARN" value is specified, all information about an application processed with warnings will be included.</p> <p>The default value is "ALL".</p>
SHORT_DEFERRED_RESPONSE	Y/N	<p>This parameter determines if application data will be included in the response file or if only ErrorText/ ErrorCode will be included for the application.</p> <p>The default value is "N".</p>
SILENT	Y/N	<p>This parameter determines whether the final screen of a report on pipe operation results will open.</p> <p>The default value is "N".</p>

Parameter	Values	Parameter description
MASK_CONTRACT_NUMBER	Y/N	<p>This parameter determines whether contract numbers will be masked in the response file.</p> <p>The default value is "N".</p>
CARD_EXPIRE_OLD_MODE	Y/N	<p>This parameter determines if information about the card term of validity will be exported in old format.</p> <p>The default value is "N".</p>
EXPORT_DATA_DIRECTORY		<p>Mandatory parameter.</p> <p>This parameter specifies the path to the directory for storing response files.</p>
SENDER_CODE		<p>Mandatory parameter.</p> <p>Sender code value specified in the filename in the Sender field of the FileHeader aggregate.</p>
APPL_IN_FILE	Number	<p>Maximum number of applications in one file.</p> <p>The default value is "10".</p>
VALIDATE_FILE	Y/N	<p>If this parameter is set to "Y" (default value), the file will be checked for compliance with the XSD schema.</p>
TRANSFORM_FILE		<p>This parameter is used to specify xslt-transformation of an exported file.</p>

Parameter	Values	Parameter description
EXCLUDE_CARD_APPLETS	Y/N	<p>This parameter determines whether card applet information should be included in a response file.</p> <p>For card applet information to be added, the parameter value must be "N" and the <a href="#">RESULT_DTLS</a> parameter must contain "Children=Y;".</p>



The "XML Applications Overall Response" pipe exports information about applications with the "Posted" or "Declined" posting statuses and with the "Processed" outward status. For a description of application statuses, see the section "[Monitoring Application Workflow](#)".

## 2.5 "XML Applications Renew" Pipe Parameters

Parameter	Values	Parameter description
INPUT_FORMAT	UFX/ Application	Makes it possible to define the format of an incoming file. Files in the wrong format will be rejected and put in the corresponding directory. The associated record will be added to the Process Log. No response file is created for files in the wrong format.
BRANCH_ID_TYPE	BRANCH/ BANK/ CB	Default method for identifying the financial institution. When the "BRANCH" value is specified, identification is made according to the value of the Branch Code field (this is the default value), "BANK" – identification is made according to the value of the Bank_Code field, "CB" – according to the CB_Code value.

Parameter	Values	Parameter description
PRODUCT_GROUP		Product group code. Codes are set in the <i>Code</i> field of the "Full → Configuration Setup → Products → Product Definition → Product Groups" table.
FILE_NAME_PREFIX	Character	Prefix in the name of the incoming file; the default value is "xadvapl". The prefix must contain 7 characters (i.e. comply with the length of the standard "xadvapl" prefix).
FILE_CODING		File encoding allowed for XML files, for example:  "utf-8" (default value)  "windows-1251".
RESP_NAME_PREFIX	Character	Prefix in the name of the outgoing response file.  The default value is "R".
ERROR_DIR	String	Specifies the error file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/Err".
OUTPUT_DIR	String	Specifies the response file directory name.  The default value is "@RBS_INTERCHANGE_DIR@/Out".

Parameter	Values	Parameter description
PROCESSED_DIR	String	<p>Specifies the processed file directory name.</p> <p>The default value is "@RBS_INTERCHANGE_DIR@/Arch".</p>
SOURCE_DIR	String	<p>Specifies the incoming file directory name.</p> <p>The default value is "@RBS_INTERCHANGE_DIR@/In".</p>
GEN_POSIT_RESP	NO/WARN	<p>Depending on the result of application processing, determines whether to generate a response file. If the value of this parameter is "N", a response file will only be generated if an error occurs. When the parameter value is "WARN", a response file will be generated if an error or warning occurs.</p>
RESP_FOR_DUPL_FILES	Y/N	<p>When the value of this parameter is "Y", when an attempt is made to import a file that has already been imported a response file will be generated with a message that the file has already been imported. The file being imported will be put in the error file directory.</p> <p>The parameter's default value is "N". In this case, a response file is not generated, the file being imported remains in the incoming file directory and an error message is generated when import is repeated.</p>
RESPONSE_FOR_HEADER_ERRORS	Y/N	<p>When this parameter is set to "Y", a response file will be generated even when format errors occur in the file header.</p> <p>The default value is "N".</p>

Parameter	Values	Parameter description
SILENT	Y/N	<p>This parameter determines whether parameter values will be requested from the user during pipe operation and whether a final window with a report on pipe operation results will be opened.</p> <p>The default value is "N".</p>
OLD_FILE_NAME	Y/N	<p>If this parameter is set to "Y", simple file name format will be used.</p> <p>The "N" value is used for working with expanded file name format.</p> <p>The default value is "N".</p>
APPL_ERROR_NOT_FATAL	Y/N	<p>If this parameter is set to "Y", the import procedure will not be aborted if an application containing an error is found. Otherwise (when the parameter value is "N") the import procedure is aborted.</p> <p>The parameter's default value is "N".</p>
USE_ORIGINAL_REG_NUMBER	Y/N	<p>When this parameter is set to "Y", a response file's OrigAppNumber field will contain the number of the original application.</p> <p>The default value of the parameter is "N" (the number of the original application is not used).</p>



The parameter RESULTDTLS with the "UpdateRq=Yes;" value must be specified in settings of the menu item used to start the "XML Applications Renew" pipe.

## 3. Response File Error Messages

A response file may contain error messages found when processing application files. All error messages as well as warnings and information messages are given a prefix containing the registration number (RegNumber) of the application whose processing caused the error.

The error codes 90000 – 99999 are reserved for use in custom procedures.

Information about errors that may occur when loading applications with device contracts data is provided in the section "Entering Client and Contract Data Manually" of the document "Acquiring Module User Manual".

### 3.1 General Errors

Error code	Message text	Comments
0	Success	The request was processed successfully.
100	General Error	An error occurred when processing the request. Additional information is not provided.
1005	Validation error	Xml message checking error
1020	Required Element Not Included	One or several required elements are missing from the request text.

Error code	Message text	Comments
1050	Invalid Enum Value	The request contains invalid values.
1122	File broken	File structure broken.
1152	File name error	File name error.
1172	Fatal error	Fatal error.
1220	Invalid Identifier	Incorrect identifier of relation between objects.
2195	Invalid Order Department code	Financial institution branch code incorrectly specified for the application.
2220	Client is not ready	Client record not approved.
2226	Invalid Contract Branch	Financial institution branch code incorrectly specified for the application.
2300	Financial institution not found	Financial institution not found.
2400	Contract not found	Contract not found.
2420	Contract does not pass Search Check	Found contract does not meet conditions for validating the search.



Error code	Message text	Comments
2430	Prohibited by Check Available scenario in Contracts hierarchy / Main and Subordinated Contracts have different Clients	No main contract was found.
2440	Contract is not ready	Contract is not approved.
2450	Contract with such number already exists	Contract with this number already exists.
2460	Invalid Contract Status	Invalid contract status.
2461	Multiple Contract Statuses exists for specified code	Several contract statuses for the specified code.
2470	Internal Oracle error	Internal Oracle error.
2500	Application not found	Application not found.
2510	Multiple applications found by specified criteria	Several applications found according to the specified criteria.
2520	Reserved	Reserved.

## 3.2 Application Processing Errors

Error code	Message text	Comments
2003	Stop list channel specified incorrectly	Stop list channel specified incorrectly.
2004	Stop list Action Type specified incorrectly	Action for the record in the payment system exception list specified incorrectly.
2005	Stop list Area specified incorrectly	Geographical area for the record in the stop list specified incorrectly.
2006	Stop list Request Code specified incorrectly	Stop list request code specified incorrectly.
2007	Stop list Expiry Date specified incorrectly	Stop list expiry date is specified incorrectly.
2008	Action type was not specified for StopList	No action set for the record in the payment system exception list.
2009	Stop list Card sequence number specified incorrectly	Stop list plastic sequence number specified incorrectly.
2010	Stop list Card Expiry specified incorrectly	Stop list card expiry date specified incorrectly.
2011	Unable to check StopList	Unable to check the stop list.
2012	Unable to update StopList	Unable to update the stop list.
2013	Unable to post StopList	Unable to send the stop list.
2014	Adv Application was not found by id	Application not found for this number.

Error code	Message text	Comments
2015	Action is not allowed for a sub-Application	Action cannot be executed for a subordinate application.
2016	<ErrMsg>	Contract checking errors at application acceptance stage.
2017	Invalid ChangeClient Tag value	Incorrect tag value for changing client.
2019	Branch code was not specified	Financial institution code not specified.
2020	Incorrect branch ID type	Unknown search type specified for financial institution.
2021	Financial institution not found by code	Financial institution not found for this code.
2022	Multiple financial institutions found for the code specified	Several financial institutions found for this code.
2023	Unknown Object Type for change Institution	Object (client/contract) for which financial institution should be changed is not specified.
2024	Unable to change Institution in the Application for New Object	Unable to change financial institution when creating a new object.
2025	<ErrMsg> spac.CHECK_CLIENT_R	Errors when checking client data.

Error code	Message text	Comments
2026	Credit limit reason is too long, 255 characters maximum	The reason for changing the credit limit contains too many characters. The maximum size is 255 characters.
2027	<ErrMsg>  (Invalid Contract Status / Contract Category of given Status does not match with Contract Category of given Contract).	Errors related to an invalid contract status.
2028	Multiple Contract Statuses exists for specified code	Several contract statuses found for this code.
2029	Contract Status Comment Missing	Contract status change reason missing.
2030	Credit limit reason missing	Credit limit change reason missing.
2031	Product is not Ready	Contract product is not approved, credit limit cannot be changed.
2032	Product is not Active	Product is not active, credit limit cannot be changed.
2033	Credit limit is too low	Credit limit value specified is too low.
2034	Credit limit is too high	Credit limit value specified is too high.
2035	Event not found by codes	No Event found for the specified codes.

Error code	Message text	Comments
2036	Event Date To is less than Date From	"Date To" field value less than that in the "Date From" field.
2037	Unable to define reference object: both Client and Contract are presented in Application for CustomerClassifier Modification	Unable to define the object for which a classifier must be created: client or contract.
2038	Load classifier error	Errors when setting a classifier during the application acceptance stage.
2039	Customer identifier should not be null	Client identifier must not contain a null value.
2040	There is no Application Client Data in Adv Application for Client	No client data in application to work with the client record.
2041	There are many Application Client Data in Adv Application for Client	Application to work with the client record contains several data sets for the client.
2042	There is no reference to a Client in Adv Application for Client	No reference to client record in the application to change client record properties.

Error code	Message text	Comments
2043	Configuration error: Classifier value <%%> for CONTR_STATUS is not configured yet	<p>Configuration error: CONTR_STATUS value for the status code specified in an application to change the contract status is missing.</p> <p>The contract status with the code &lt;%%&gt;, added to the Contract Statuses Reference (Full → Configuration Setup → Contract Types → Contract Statuses) is missed in the system classifier CONTR_STATUS (values are not synchronized).</p>
2044	There is a reference to a Client in Application	Reference to client record in application to add a client.
2045	Incorrect Action in Adv Application for Client	Incorrect action in the application to change client record properties.
2046	There are many Application Address Data in Adv Application	Application contains several address data sets.
2047	Address cannot be processed in Application for Client modification	Additional address data cannot be processed when processing the application to work with the client record.
2048	Invalid time format	Invalid time format.
2049	Wrong time format	Invalid time format.
2050	There are many Application Device Record Data in Adv Application for Contract	Application to work with a contract contains several device data sets.

Error code	Message text	Comments
2051	Additional Address conflicts with existing addresses	Additional addresses conflict with existing ones.
2052	There is no reference to an Address in application for Address modification	No reference to address record in the application to change an address.
2053	Client not found for an Address	No client record found for the address.
2054	Contract not found for an Address	No contract found for this address.
2055	Multiple device parms found by the code	Several device parameter records found for the code.
2056	Product is not ready	Product specified for contract creation not approved.
2057	Product not found by codes	No Product found for the codes.
2058	Invalid Contract Subtype:	Invalid contract subtype.
2059	Multiple Contract Subtypes exists for specified code	Several contract subtypes found for the specified code.
2060	Contract Subtype is not active	Contract subtype not approved.
2061	Invalid Accounting Scheme	Invalid Account Scheme.

Error code	Message text	Comments
2062	Multiple Accounting Schemes exists for specified code	Several Account Schemes found for the specified code.
2063	Accounting Scheme is not ready	Account Scheme not approved.
2064	Invalid Service Pack	Invalid Service Package.
2065	Multiple Service Packs exists for specified code	Several Service Packages found for the specified code.
2066	Service Pack is not ready	Service Package not approved.
2067	There is no Relation Contract Data in Adv Application	No related contract information data in the application.
2068	There are many Application Contract Data in Adv Application for Contract	Application contains several data sets containing related contract information.
2069	Incorrect relation tag	Invalid value of contract relation tag.
2070	Incorrect Action in Adv Application for Contract Relation	Incorrect action specified in application to work with contract relation.
2071	There is no Application Contract Data in Adv Application for Contract	No contract information data for the application to work with a contract.



Error code	Message text	Comments
2072	There are many Application Contract Data in Adv Application for Contract	Several data sets containing contract information in the application to work with a contract.
2073	There is no reference to a Contract in Adv Application for Contract	No reference to contract record in the application to work with a contract.
2074	Incorrect Action in Adv Application for Contract'	Incorrect action in the application to work with a contract.
2075	Risk Scheme not found by ID	No Risk Control Scheme found for the specified identifier.
2076	Chip Scheme not found by ID	No Chip Scheme found for the specified identifier.
2077	Invalid ChangeMain tag value	Invalid value of tag to change main contract.
2078	Embossing name missing	Name for embossing is missing.
2079	There is no Application Address Data in Adv Application	No address information data in the application.
2080	There are many Application Address Data in Adv Application	Application contains several data sets with address information.
2081	There is no reference to a Client or Contract in application for Address modification	No reference to client or contract record in the application to modify an address.

Error code	Message text	Comments
2083	Inconsistent Appl Info for Client	Incorrect additional information for client record.
2085	Inconsistent Appl Info for Contract	Incorrect additional information for client record.
2087	Action Type AddOrUpdate is supported only for single Appl Info	"AddOrUpdate" or "Update" action is only supported for single additional information data set.
2088	Appl Info not found	Additional information not found in the application.
2089	Appl Info should be empty for Delete Action Type	Application to delete data from the additional information table cannot contain other data.
2090	Count of Appl Info is more than Max Count	Maximum permissible number of records for one application in the additional information table has been exceeded for this classifier type.
2091	Action Type AddOrUpdate is supported only for single Appl Info. Multiple found	"AddOrUpdate" action is supported for only one additional information data set, and several sets were found.
2094	ApplInfo not found for Update	During update, no record related to the client or contract was found in the additional information table.
2095	Transaction currency cannot be empty	A currency must be specified for the transaction.

Error code	Message text	Comments
2096	Incorrect transaction currency specified	Incorrect transaction currency specified.
2097	Multiple currencies exists for specified code	Several currency records found for the specified code.
2098	Client not found for Appl Info modification	No client record for modifying additional information.
2099	Contract not found for Appl Info modification	No contract found for modifying additional information.
2100	Multiple Appl Info Types found by code	Several application additional information classifiers were found for this code.
2101	Appl Info Types not found by code	No additional information classifier was found for the specified code.
2102	Appl Info not found for Application	No record found in the additional information table.
2103	There is no Application Usage Data in Adv Application	No usage limiter data in application.
2104	There are many Application Usage Data in Adv Application	Several data sets containing usage limiter data in application.
2105	Invalid Usage modification type specified	Incorrect action for usage limiter specified.
2107	Contract not found for Usage modification	No contract found to modify usage limiter.

Error code	Message text	Comments
2108	Limit parameters must be empty for this modification type	Application to execute this action for the usage limiter cannot contain usage limiter data.
2109	Usage Currency Missing	Currency must be specified for usage limiter.
2110	Contract service pack not set	Service Package not set for contract.
2111	Invalid Usage Switch Dates	Invalid data about usage limiter modification effective date.
2112	Usage not found by id	No usage limiter found for this identifier.
2113	Usage not found by code	No usage limiter found for this code.
2114	There is no Application Card Data in Adv Application	The application does not contain card data.
2115	There are many Application Card Data in Adv Application	Several data sets containing card information in the application.
2116	Invalid Card modification type specified	Incorrect action for card specified.
2117	Contract not found for Card modification	No contract was found for card modification.
2118	Card production/replacement permitted only for Card Contracts	Card production/replacement only possible for card contracts.

Error code	Message text	Comments
2119	Unable to redefine card expire, because previous card does not exist	Unable to redefine card expiry date, as previous card was not found.
2120	Production parameters should be empty for action type	For this action, the application may not contain card production parameters.
2121	Appl Info Type with ForWhom <%%> is not supported	<p>Classifier of additional information (Application Info Type) is not supported for this object/process.</p> <ul style="list-style-type: none"> <li>• "C" – Client</li> <li>• "A" – Contract</li> <li>• "M" – Merchant Management</li> <li>• "D" – Device Parm to Doc (device parameters (tags) that must be saved in a document's Add_Info field)</li> <li>• "S" – Device Parm Ctrl (device parameters that affect document posting).</li> </ul>
2122	<ErrMsg>	Errors when unmarking cards.
2123	Initial lock operation is not supported with production type	For this card production reason, it is not possible to set a marker locking the card before initial use.
2124	Card expire not declared for production type	Card expiry date not set for updating card data.
2125	There is no active plastic for production type	No active plastic for updating card data.
2126	This is no active plastic for the Lock action under Contract	No active plastic to lock a card for this contract.

Error code	Message text	Comments
2127	There is no Application Standing Order Data in Adv Application	No standing payment order data in the application.
2128	There are many Application Standing Order Data in Adv Application	Application contains several data sets containing standing payment order data.
2129	Contract not defined in Application for a Standing Order	No contract found in the application to modify a standing payment order.
2130	Order parameters must be empty for this modification type	This application may not contain standing payment order parameters.
2131	Extended Order parameters are supported only in Applications with ActionType	Additional standing payment order parameters can only be changed using an application with the ActivateIndividual action.
2132	Order Code or Payment Type must be specified in an Application for Standing Order	Payment order code or payment type must be specified in the application to work with a standing payment order.
2133	Amount Percent is too big	The value in the "Amount Percent" field of the standing payment order is too large.
2134	Amount Percent must be positive	The "Amount Percent" field of the standing payment order must contain a positive value.

Error code	Message text	Comments
2135	Target Amount should be positive	The "Target Amount" field of the standing payment order must contain a positive value.
2136	Amount Event should be positive	The "Amount Event" field of the standing payment order must contain a positive value.
2137	Both Amount Percent and Target Amount are filled	A value may be specified either in the "Amount Percent" field or in the "Target Amount" field for a standing payment order.
2138	Order not found by code	No standing payment order found for this code.
2139	An Individual Order can be Activated and Deactivated Only.	An individual standing payment order cannot be activated by the ActivateStandard action.
2140	Support of an Individual Order is turned off	Support of individual standing payment orders is disabled.
2141	Invalid Order Receiver Code	Invalid receiver code specified for standing payment order.
2144	Multiple 3D Auth values exist	Several authentication scheme parameter values exist.
2145	3D Auth value already exists	Authentication scheme parameter value is already set.

Error code	Message text	Comments
2146	There is no Application Auth Method Data in Adv Application	No authentication scheme data in the application.
2147	There are many Application Auth Method Data in Adv Application	Several authentication scheme data sets in the application.
2148	Action type is not supported in Applications for Auth Method	This action not supported by applications to modify authentication schemes.
2149	Auth type or Auth Scheme ID is not defined	Authentication type or scheme ID not defined.
2150	Contract not found in Application for %% modification	No contract found for application to modify an authentication scheme.
2151	Client not found in Application for %% modification	No client found for application to modify an application scheme.
2152	Multiple 3D Auth schemes exist for the type: %%	Several authentication schemes founds for the authentication type specified in the application.
2153	<ErrMsg>	Authentication scheme not approved.  Errors when searching for an authentication scheme for a client or contract (TD Schemes).
2154	3D Auth scheme already exists for the type: %%	Authentication scheme already exists for this type.



Error code	Message text	Comments
2155	Unable to find Auth scheme for Action	Unable to find authentication scheme for this action.
2156	There is no reference to a Contract in Adv Application for Contract	No reference to contract in application to change contract.
2157	There is no reference to a Client in Adv Application for Client	No reference to client record in application to change client record.
2158	Incorrect Action in Adv Application	Incorrect action specified in application to update client identifier in external systems (CustomerIdentifier).
2159	Incorrect Action in Adv Application	Incorrect action specified in application.
2160	There are too many Application Action Data in Adv Application	The application contains several data sets with action data.
2161	There is no Application Action Data in Adv Application	No action data in the application.
2162	Multiple Affiliated Clients found for Type	Several records about affiliated clients found for this type.
2163	No Affiliation Type defined in Application	No client affiliation type specified.
2164	No Affiliated Client defined in Application	No affiliated client defined in the application

Error code	Message text	Comments
2165	No reference to a Client or to a Contract in Application for Affiliation	No reference to a client or contract in the application to change affiliated client parameters.
2166	No Application Affiliation data in Application for Affiliation	No client affiliation data in the application to change affiliated client parameters.
2167	Multiple Preferreds found for the code or Preferred Type specified	Several records found for this counterparty code or category.
2168	Preferred data not found in Application	No data on preferred counterparty modification found in application.
2169	Multiple Preferred records found in Application	Several preferred counterparty configuration records found in application.
2170	Preferred modification type RestoreStandard is not supported	The "RestoreStandard" action for preferred counterparty configurations is not supported.
2172	Preferred parameters must be empty for this modification type	For this action, the application may not contain preferred counterparty data.
2173	Invalid Preferred modification type	Invalid action for preferred counterparty record.
2174	Contract not found for Preferred modification	No contract found for preferred counterparty configuration.
2175	Contract should exist for Preferred deactivation	To deactivate the preferred counterparty, a contract must be specified.

Error code	Message text	Comments
2177	Invalid preference type	Invalid preferred counterparty category.
2178	Invalid SIC	Invalid SIC.
2179	Preferred already exists	Preferred counterparty record already exists.
2180	Preferred was not found by Code or Preferred Type ID	Preferred counterparty not found for preferred counterparty code or ID.
2181	Invalid Tariff modification type	Invalid action for tariff.
2182	Contract not found for Tariff modification	No contract found for tariff modification.
2183	Adv Applications Financial Institution Missing	Financial institution information missing.
2184	Application Action Type is empty	No action specified in the application.
2185	Application Object Type is empty	No object specified in the application.
2186	Adv Application registration number is not defined for ID	No registration number specified for the application.
2187	Adv Application with such number already exists	An application with this number already exists.

Error code	Message text	Comments
2188	Adv Application Order Department Missing	<p>No financial institution branch specified for the application.</p> <p>A financial institution branch is only checked in the parent application.</p>
2189	Adv Applications Duplicate Count is incorrect	Invalid number specified in "Duplicate Count" field.
2190	Count of an Application Duplicates cannot be more then 1000, found: %%	The value specified in the "Duplicate Count" field may not exceed 1000.
2191	Application processing is not implemented for this object	Application processing not supported for this object type.
2192	Client not found by id:	No client record found for this ID.
2193	Contract not found by id:	No contract record found for this ID.
2194	Application has non-checked load errors. The last one: %%	The application contains loading errors that have not been fixed. The last error: %%.
2196	Adv Application has inapplicable status	Incorrect application status.
2197	Adv Application is not captured	No officer specified for this application.

Error code	Message text	Comments
2198	Current officer is not defined	No officer specified for system entry.
2199	Application captured by another officer	Another officer is specified for this application.
2200	<ErrMsg>	Errors when closing a contract's temporary credit limits.
2201	Unexpected application status to capture application	Officer cannot be assigned for the application status.
2203	Unexpected application status to restore application	Application cannot be returned to workflow due to application status (i.e. cancellation of Declined status).
2204	Application already restored	Application already returned to workflow.
2205	WF Action cannot be processed:	This workflow action cannot be executed.
2206	Any WF Action cannot be processed	No workflow actions can be executed.
2207	Adv Application unknown action	Unknown action for application.
2208	Adv Application was not found by id	No application found for this ID.
2209	Application has been already captured	Officer already assigned for this application.

Error code	Message text	Comments
2210	<ErrMsg>	Errors when moving a contract to another contract hierarchy with a change in financial institution.
2211	<ErrMsg>	Errors when assigning another financial institution to a contract.
2212	<ErrMsg>	Errors when moving a contract to another contract hierarchy in the same financial institution.
2213	<ErrMsg>	Errors when changing contract status.
2214	<ErrMsg>	Errors when setting a fixed minimum credit limit for a contract (applicable if the global parameter FIXED_CREDIT_LIMIT="Y" is used).
2215	<ErrMsg>	Errors when setting a contract credit limit.
2216	<ErrMsg>	Errors when opening an Event for a contract.
2219	<ErrMsg>	Errors when checking a client's e-mail address.
2220	Invalid Client Branch in Adv Application for Client	An incorrect financial institution branch number is specified for this application.
2221	Device Record not found for this Contract	Device parameter data not found for this contract.

Error code	Message text	Comments
2231	Card do not honor	The transaction has been declined by the issuer without a reason.
2232	Order not found	Payment order not found.
2233	Multiple order found for the code specified	Several payment orders found for this code.
2239	Incorrect relation contract	Incorrect related contract.
2253	<ErrMsg>	Errors when checking a contract at the application approval stage.
2264	<ErrMsg>	Errors when approving a memo for a contract or client.
2270	Accept failed with internal error	Error when accepting an application. The application has not been accepted due to an internal error.
2277	<ErrMsg>	Errors when checking a classifier at the application approval stage.
2279	<ErrMsg>	Errors when setting a contract instalment limit.
2281	<ErrMsg>	Errors when erasing a card's PIN.
2283	<ErrMsg>	Errors of loading mandate for SEPA.

Error code	Message text	Comments
2284	<ErrMsg>	Errors when checking a counterparty or mandate for SEPA.
2285	<ErrMsg>	Errors when checking counterparty data at the application approval stage.
2295	<ErrMsg>	Errors when clearing PIN counter data.
2298	<ErrMsg>	Errors when setting a client or contract parameter.
2316	<ErrMsg>	Errors when creating and processing an instalment plan.
2317	Instalment scheme code or Instalment code should be specified for: %%"	An <i>Instalment scheme code</i> or Instalment scheme service code ( <i>Instalment code</i> ) must be specified for the application to edit or create an Instalment plan accordingly.
2324	GL has not been exported for previous working day	<p>Application to create an instalment plan for a transaction in a closed billing cycle cannot be processed since the "Close GL" or "GL export" process has not been completed. Applications that have not been processed will be rejected.</p> <p>If necessary, error code "2324" can be used like error code "2265" when configuring workflow. For more information, see the section "Working with Applications in an HA Secondary Node" of the document "Advanced Applications R2".</p>



The "workflow" mode is only available in the Advanced Applications R2 module.



### 3.3 Errors Processing Applications for Managing Way4 Users

Error code	Message text	Comments
2240	Invalid ActionType	Invalid action for user record.
2241	There is no Application Officer Data in Adv Application for Officer	No user data in the application to modify a user record.
2242	There are many Application Officer Data in Adv Application for Officer	Several data sets with user data in the application to modify a user record.
2243	UserID is not declared	User ID not specified.
2244	Invalid symbol in Officer ID	Invalid symbol in user ID.
2245	Invalid Working Date: %%. Supported format: W; 12:00-15:00	Working time specified incorrectly. Supported format: W;12:00-15:00.
2248	<ErrMsg>	Error when processing a user record.
2249	Invalid Action Type	Invalid action for user group record.

Error code	Message text	Comments
2250	There is no Application Officer Group Data in Adv Application for Officer Group	No group data in the application to modify a user group record.
2251	There are many Application Officer Group Data in Adv Application for Officer Group	Several data sets with group data in the application to modify a user group.
2252	<ErrMsg>	Error when processing a user group.
2256	Status is empty	User record <i>Status</i> field not filled in.

## 3.4 Errors Importing Applications

Error code	Message text	Comments
2254	Too many payment receiver party data were found for Payment Receiver	The application to modify payment recipient data contains several data sets with transaction participant data.
2255	Too many payment receiver data were found for order	The application to modify a standing payment order contains several data sets with payment recipient data.

Error code	Message text	Comments
2257	Too many payment receiver data were found in application	An application to change Payee parameters contains several sets of Payee data.
2258	Code and Payment Type should be specified for Payment Receiver	The payment code and type must be specified for the Payee.
2259	Client is not specified for personal Payment Receiver	A reference to a client record is not specified for a personal Payee.
2260	Credit amount missing	Amount for changing credit limit is missing.
2261	Credit limit currency missing	Currency for changing credit limit is missing.
2266	Instalment limit reason missing	The reason for setting the instalment limit is missing.
2267	Instalment limit amount missing	The instalment limit amount is missing.
2270	Device status is not supported in Adv Applications	An application cannot be used to set this status for the device.
2271	Device status "NotConfigured" is supported only in Add Contract Applications	The "NotConfigured" status for the device can only be set using an application to add a contract.
2272	Payment Receiver is not found for Update action	When updating, no payment recipient record was found.

Error code	Message text	Comments
2273	Payment Receiver with code already exists for client	A payment recipient with the specified code already exists for this client.
2274	No Payment Receiver data was found in application	No payment recipient data was found in the application.
2275	Event is not allowed for contract	This Event cannot be set for the contract.
2276	Classifier value should not be set for Disable classifier application (new)	When deleting a classifier value, a new value is specified in error.
2277	Classifier does not exist	This classifier does not exist.
2278	Classifier value does not exist	This classifier value does not exist.
2279	Instalment limit processing errors	Errors occurred when setting the instalment limit.
2286	Invalid Client Type	Invalid client type specified.
2287	Invalid Service Group	Invalid service group specified.

Error code	Message text	Comments
2288	Application is skipped: The service <Service_Name> is not active on this node "Node_Name".	<p>Application skipped: the Service is not active in this HA node.</p> <p>When processing an application in the primary node (contract authorization performed in a secondary node), the application gets the "Waiting" status when an attempt is made to accept it. The application acceptance process will only be successful after contract authorization is performed in the primary node again.</p>
2290	Invalid Contract Category	Incorrect category specified in application to update contract status.
2291	Invalid Liability category	Incorrect "Liability" hierarchy category specified for this contract.
2301	Product group not found by code	Product group not found for this code.
2292	Application for contract financial institution change should contain "ChangeInstitution" tag.	The "ChangeInstitution" tag is missing in the application to change a contract's financial institution.
2305	Multiple product groups found by code	Several Product groups found for this code.
2315	Officer not found by IDT %%	User record not found.
2321	Unknown ID type for Officer search	Incorrect user record ID type.
2325	Search check is required	Search check value must be specified.

Error code	Message text	Comments
2331	Loading of @ObjectType@ is not supported	Importing data on this object type is not supported.
2260	No Original Application found for Update	No application for updating (Renew) was found.
2261	Multiple Original Applications found for Update	Several applications for updating (Renew) were found.
2262	More than one application with identical Reg Number and Parent Application	In updating (Renew) a subordinate application, several subordinate applications with the same numbers were found.
2333	Client no found by id	No client record found for this ID.
2337	Contract no found by id	No contract record found for this ID.
2339	AuthMethodID is empty in Application for AuthMethod Delete	Method ID not set in the application to delete an authentication method.
2343	AuthMethod not found by ID	Authentication scheme parameters not found for this ID.
2344	Usage Template ID is empty in Application for Usage Modification	No limiter template ID specified in the application to modify usage limiter parameters.
2348	Usage Template ID is empty in Application for Usage Modification	No limiter template ID specified in the application to modify usage limiter parameters.

Error code	Message text	Comments
2352	Neither Contract nor Client ID specified in Application for Customer Classifier Modification	No client or contract ID specified in the application to modify client classifier.
2357	Neither client nor contract not found	No client or contract record found.
2362	ApplInfo not found by id	No additional information record found for this ID.
2401	To update Due Date, specify only this field	<p>In an application to change an instalment plan, in addition to the <i>Due Date</i> field, other fields are filled in.</p> <p>If <i>Due Date</i> must be changed for an instalment plan, only the <i>Due Date</i> field must specified in the application. The date can be shifted for an instalment plan with the "Extra Fee from Principal" attribute (i.e. when the entire principal amount is due without division into portions).</p>

## 3.5 Workflow Errors

Error code	Message text	Comments
2700	WF Action cannot be processed:	This workflow action cannot be executed.
2701	Any WF Action cannot be processed	No workflow actions can be executed.

Error code	Message text	Comments
2702	Unsupported status for Application Remove Action. The Application already processed	Action to delete application is not possible. The application has already been processed.



The "workflow" mode is only available in the Advanced Applications R2 module.

## 3.6 Errors in Checking the Uniqueness of Applications being Imported

Error code	Message text	Comments
2265	Accept application for <Object_Type>" is prohibited in the secondary database	In a secondary node of the HA platform, it is not permitted to accept applications for working with this object type.
2387	There is another approval application <%%> for Add Client with the same Individual Number (ITN).	An application to add a client with this "Individual Number" field value already exists.
2388	There is another approval application <%%> for Add Client with the same Client Social Number.	An application to add a client with this "Client Social Number" field value already exists.



Error code	Message text	Comments
2389	There is another approval application <%%> for Add Contract with the same custom identifier	An application to add a contract value with this custom identifier value already exists.
2390	There is another approval application <%%> for Add Client with the same custom identifier	An application to add a client with this custom identifier value already exists.
2391	There is another approval application <%%> for Add Client with the same Client Number	An application to add a client with this "Client Number" field value already exists.
2392	There is another approval application <%%> for Add Client with the same Client Registration Number	An application to add a client with this "Client Reg Number" field value already exists.
2393	There is another approval application <%%> for Add Contract with the same Contract Number	An application to add a contract with this "Contract Number" field value already exists.
2394	There is another approval application <%%> for Add Officer with the same User_ID	An application to add a Way4 user with this User ID field value already exists.
2395	There is another approval application <%%> for Add Officer Group with the same name	An application to add a WAY4 user group with this name already exists.
2396	There is another approval application <%%> for Add Auth Method with the same Type	An application to add an authentication scheme with this "Type" value already exists.

Error code	Message text	Comments
2397	There is another approval application <%%> for Add Preferred with the same Code or Type	An application to add a preferred counterparty with this "Code" or "Type" field value already exists.
2398	There is another approval application <%%> for Add Payment Receiver with the same Code or Type	An application to add a payment recipient with this "Code" or "Type" field value already exists.
2399	There is another approval application <%%> for Add Address with the same Type	An application to add an address with this "Type" field value effective for the dates specified already exists.

## 4. File Formats

The section describes file formats of incoming and outgoing files (XML application format).

### 4.1 Incoming File Format

An incoming file contains data on applications for creating new clients and contracts and for editing their properties, as well as on applications for issuing new cards.

Files are generated in XML format. All aggregates and simple fields are XML elements. The main file element must be named "**ApplicationFile**".

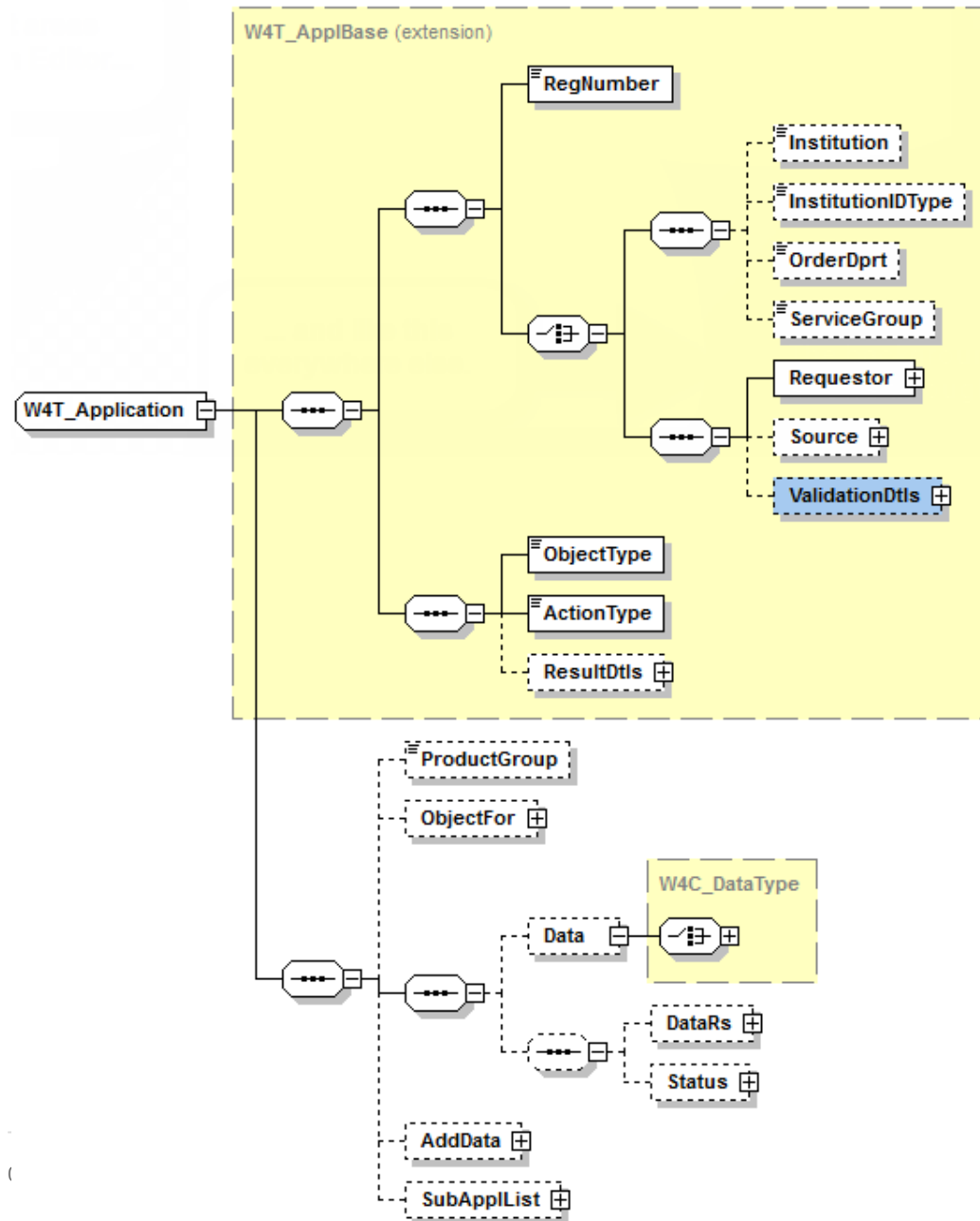
Data types:

- **C-xx** – text field, may contain any printable symbols. **xx** is the maximum field length.
- **Integer** – an integer
- **Date (JJJ)** – the date in JJJ format, where JJJ is the number of days in the year (from 001 to 366)



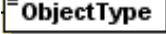
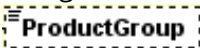
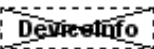
Note that **alphabetical currency codes** must be used in files being imported.


The incoming file format is described using an xsd schema. An example of this graphical representation is shown in [figure](#).



### Graphical representation of file format

This graphic representation uses the following format:

- Mandatory structure elements are shown as solid line rectangles .
- Optional elements are shown as dashed line rectangles .
- Elements reserved for future use are shown as crossed out rectangles .

The symbol  indicates that all elements it connects must be included into the higher-ranking element in the same order they are shown in the schema.

The symbol  indicates that a higher-ranking element contains one of the elements connected with the use of this character.

Every element in the schema contains a hyperlink to its description.

An element of the "Any" type contains an XML structure whose format is undefined.

Letters X..Y next to an element mean that it may contain X to Y sub-elements, where "\_" means that the number of sub-elements is unlimited.

The structure of a simple filename (supported for compatibility with earlier versions):

N	Field	Type	Usage	Comments
1.	File Name Prefix	C-1	M	"A"
2.	File Sender	C-4	M	Sender code is the last (right) four digits in the Sender field of the FileHeader aggregate or, if it contains less than 6 characters, the value of the field padded from the right with zero characters.
3.	Delimiter	C-1	M	"_" (underscore)

N	Field	Type	Usage	Comments
4.	File Number	Integer (2 decimal places)	M	File serial number.
5.	Delimiter	C-1	M	Delimiter character "."
6.	File Date	Date (JJJ)	M	File creation date

The structure of an extended filename:

N	Field	Type	Usage	Comments
1.	File Name Prefix	C7	M	"XADVAPL"
2.	File Sender	C-6	M	Sender code from the "Sender" field of the "FileHeader" aggregate. If the code contains less than six characters, it is right-padded with zeroes to 6 characters.
3.	Delimiter	C-1	M	"_" (underscore)
4.	File Number	Integer (5 decimal places)	M	File serial number.
5.	Delimiter	C-1	M	Delimiter character "."

N	Field	Type	Usage	Comments
6.	File Date	Date (JJJ)	M	File creation date

To register a new application source, add a record with the following parameters in the "BIN Table for RBS" table (Full → Configuration Setup → Routing → BIN Groups → [BIN Table]) for the "RBS" BIN group:

- *Data Source* = "Own"
- *Channel* = "RBS"
- *Member* = <code of application source being added with the prefix "APP", for example, "APP0001">.

An incoming file schema is shown in the xml\_appl\_schema.html file.

### 4.1.1 Clearing Fields Using Applications

To clear a field using an application, it is necessary to transmit a set of three specific symbols in this field: "\*#N". An example of clearing data in the CompanyName field for a plastic card:

```
<PlasticInfo>
<FirstName>IVAN</FirstName>
<LastName>IVANOFFF</LastName>
<CompanyName>*#N</CompanyName>
</PlasticInfo>
```



Note that there are limits on clearing fields using an application:

- Fields with the "varchar2" data type can only be cleared.
- Fields with a length of fewer than 3 symbols cannot be cleared.
- Clearing of fields with the "date" data type using an application is not supported.

### 4.1.2 Resetting Values of Numeric Fields to Default Values

Numeric field values are reset to default values as an update (*Action Type* = "Update"): specify a new value for this field in a UFX request.

An example of an application for changing a contract's *RiskFactor* field value to "1":



```

<?xml version="1.0" encoding="UTF-8"?>
<ApplicationFile>
  <FileHeader>
    <FormatVersion>2.0</FormatVersion>
    <Sender>000100</Sender>
    <CreationDate>2017-09-14</CreationDate>
    <CreationTime>01:02:22</CreationTime>
    <Number>109</Number>
    <Institution>0001</Institution>
  </FileHeader>
  <ApplicationsList>
    <Application>
      <RegNumber>C862894-060925_2017-CONTRACT-109</RegNumber>
      <OrderDprt>0101</OrderDprt>
      <ObjectType>Contract</ObjectType>
      <ActionType>Update</ActionType>
      <ObjectFor>
        <ContractIDT>
          <ContractNumber>5413330116231417</ContractNumber>
        </ContractIDT>
        <Client>
          <ClientInfo>
            <ShortName>Test Client 34960</ShortName>
          </ClientInfo>
        </Client>
      </ObjectFor>
      <Data>
        <Contract>
          <CommentText/>
          <RiskFactor>1</RiskFactor>
        </Contract>
      </Data>
    </Application>
  </ApplicationsList>
</ApplicationFile>

```

## 4.2 Format of outgoing files

Outgoing Advanced Applications files can be separated into two types: response files after importing incoming files and report files generated after the applications in the incoming files or entered using DB Manager are processed.

Response and report files are created in the outgoing mail directory of the corresponding financial institution (see the section "The RBS Interchange Directory Tree" of the document "CBS Interface").


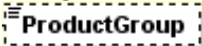
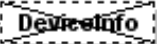
Files are generated in the XML format. All aggregates and simple fields are XML elements. The main file element must be named "ApplicationResponseFile". The following elements must always start with the first row position: "**ApplicationResponseFile**". The next elements (together with their sub-elements) must take up exactly one row in the file: "FileHeader", "Notification", "File Trailer".


Data types:

- **C-xx** – text field, may contain any printable symbols. **xx** is the maximum field length.
- **Integer** – an integer
- **Date (JJJ)** – the date in JJJ format, where JJJ is the number of days in the year (from 001 to 366)

The outgoing file format is described using an XSD schema.

The following notation is used in the graphical representation:

- Mandatory structure elements are shown as solid line rectangles .
- Optional elements are shown as dashed line rectangles .
- Elements reserved for future use are shown as crossed out rectangles .

The symbol  indicates that all elements it connects must be included into the higher-ranking element in the same order they are shown in the schema.

The symbol  indicates that a higher-ranking element contains one of the elements connected with the use of this character.

Every element in the schema contains a hyperlink to its description.

An element of the "Any" type contains an XML structure whose format is undefined.

Letters X..Y next to an element mean that it may contain X to Y sub-elements, where "\_" means that the number of sub-elements is unlimited.

The structure of a simple filename (only supported for the XML Applications Response pipe (see ["XML Applications Response" Pipe Parameters](#))):

N	Field	Type	Usage	Comments
1.	File Name Prefix	C-1	M	Defined by the RESP_NAME_PREFIX pipe parameter (see <a href="#">"XML Applications Response" Pipe Parameters</a> ).  The default value is "R".
2.	Inward File Sender	C-4	M	Incoming file sender code. Left justified, and padded to the right with spaces. The field has the same value as the incoming file's File Sender field.
3.	Delimiter	C-1	M	"_" (underscore)
4.	Inward File Number	Integer (2 decimal places)	M	Serial number of the incoming file for the day. The field has the same value as the File Number field of the incoming file.
5.	Delimiter	C-1	M	Delimiter character "."
6.	Inward File Date	Date (JJJ)	M	Incoming file creation date. The field has the same value as the File Date field of the incoming file.

The structure of an extended filename:

N	Field	Type	Usage	Comments
1.	File Name Response Prefix	C-1	M	Defined by the RESP_NAME_PREFIX pipe parameter (see <a href="#">"XML Applications Response" Pipe Parameters</a> ", <a href="#">"XML Applications Overall Response" Pipe Parameters</a> ").
2.	Inward File Name Prefix	C-7	M	"XADVAPL"
3.	Inward File Sender	C-6	M	Incoming file sender code. The field is left-justified. If the code is more than six characters long, the last six characters are used. If the code is less than six characters long, it is left-justified and right-padded with zeroes to six characters. The field has the same value as the incoming file's File Sender field.
4.	Delimiter	C-1	M	"_" (underscore)
5.	Inward File Number	Integer (5 decimal places)	M	Sequential number of the incoming file during the current day. The field has the same value as the File Number field of the incoming file.
6.	Delimiter	C-1	M	Delimiter character "."
7.	Inward File Date	Date (JJJ)	M	Incoming file creation date. The field has the same value as the File Date field of the incoming file.

Outgoing file schema is shown in the xml\_appl\_schema.html file.

## 5. Operations with Application Objects

The [table](#) shows permitted operations with application objects. Operations whose names are marked with the "\*" symbol are only supported by pipes and are not accessible in the module's screen forms.

The "CustomerClassifier" and "PaymentReceiver" object types are obsolete and are used for backward compatibility.

The "Migrate" action is only used for first migration before starting to use Way4.

File samples are located in the following directories:

- <OWS\_HOME>\manuals\<language>\Application\_management\file\_samples\issuing – for the issuing module.
- <OWS\_HOME>\manuals\<language>\Application\_management\file\_samples\acquiring – for the acquiring module.

*Table of permitted operations with application objects*

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Client	Add AddOrUpdate Update	<Data>/<Client>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00001.001 – Add Client</li> <li>• xadvapl000100_00002.001 – Update Client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00003.001 – AddOrUpdate Client</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
ClientAddInfo	Add AddOrUpdate	<Data>/<AppInfo>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00004.001 – Add ClientAddInfo for client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00005.001 – AddOrUpdate ClientAddInfo</li> </ul>
ClientAddress	Add AddOrUpdate Update Enable Disable	<Data>/<Address>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00006.001 – Add ClientAddress for client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00007.001 – Update ClientAddress added by xadvapl000100_00006.001</li> <li>• xadvapl000100_00008.001 – AddOrUpdate ClientAddress</li> <li>• xadvapl000100_00020.001 – Enable ClientAddress</li> <li>• xadvapl000100_00009.001 – Disable ClientAddress</li> </ul>
ClientAffiliation	AddOrUpdate Disable	<Data>/ <AffiliationClient>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00010.001 – Add Client</li> <li>• xadvapl000100_00011.001 – AddOrUpdate linked client added by xadvapl000100_00010.001 to client from xadvapl000100_00001.001</li> <li>• xadvapl000100_00012.001 – Disable ClientAffiliation</li> <li>• xadvapl000100_00016.001 – Add ClientAffiliation with new client</li> <li>• xadvapl000100_00017.001 – Add two clients and affiliation link between them</li> </ul>
ClientContract	Add	<Data>/<ClientContract>	Acquiring: <ul style="list-style-type: none"> <li>• xadvapl000100_00001.003 – Add ClientContract</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
ClientAuthMethod	Add AddOrUpdate Disable	<Data>/<AuthMethod>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00013.001 – Add ClientAuthMethod for client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00014.001 – AddOrUpdate ClientAuthMethod</li> <li>• xadvapl000100_00018.001 – Disable ClientAuthMethod</li> </ul>
ClientClassifier	AddOrUpdate Disable	<Data>/ <CustomerClassifiers>	
ClientParameter	AddOrUpdate Disable	<Data>/ <CustomerParameters>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00019.001 – Set ClientParameter</li> <li>• xadvapl000100_00021.001 – Disable ClientParameter</li> </ul> Acquiring: <p>xadvapl000100_00021.001 – Disable ClientParameter</p>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Card	Add Update Lock Unlock Migrate* Renewal*	<Data>/<ProduceCard>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00003.002 – Migrate Card – contract&amp;plastic – for contract added by xadvapl000100_00001.002</li> <li>• xadvapl000100_00004.002 – Add Card – contract&amp;plastic – for contract added by xadvapl000100_00001.002</li> <li>• xadvapl000100_00005.002 – Lock Card</li> <li>• xadvapl000100_00006.002 – Unlock Card</li> <li>• xadvapl000100_00007.002 – Renewal Card (update existing card_info record)</li> <li>• xadvapl000100_00008.002 – Reissue Card – instead lost</li> <li>• xadvapl000100_00009.002 – Erase PIN</li> <li>• xadvapl000100_00052.002 – Reissue Card, plastic only</li> </ul>



Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Contract	Add Update ClearPINAttempts * Migrate*	<Data>/<Contract>	<p>Issuing:</p> <ul style="list-style-type: none"> <li>• xadvapl000100_00001.002 – Add Contract for client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00002.002 – Update Contract</li> <li>• xadvapl000100_00043.002 – Add subcontract for client</li> <li>• xadvapl000100_00047.002 – Move one contract to another existing client</li> <li>• xadvapl000100_00048.002 – Move whole contract tree (including parents) to another existing client</li> <li>• xadvapl000100_00049.002 – Move contract and its sub-contracts to another existing client</li> <li>• xadvapl000100_00050.002 – Create client and move one existing contract to created client</li> <li>• xadvapl000100_00054.002 – Update contract with changing financial institution</li> <li>• xadvapl000100_00046.002 – Clear PIN Attempts</li> </ul> <p>Acquiring:</p> <ul style="list-style-type: none"> <li>• xadvapl000100_00002.003 – Add Imprinter contract for acquiring contract added by xadvapl000100_00001.003</li> <li>• xadvapl000100_00003.003 – Add POS contract</li> <li>• xadvapl000100_00004.003 – Add ATM contract</li> <li>• xadvapl000100_00005.003 – Add override device parms to ATM added by xadvapl000100_00004.003</li> <li>• xadvapl000100_00006.003 – Add ATM Retail contract for client added by xadvapl000100_00001.003 and ATM added by xadvapl000100_00004.003</li> <li>• xadvapl000100_00007.003 – Add Acquirung contract with DeviceDocParms</li> <li>• xadvapl000100_00008.003 – Update DeviceDocParms in Acquirung contract</li> <li>• xadvapl000100_00009.003 – Add Acquirung contract and Device with DeviceDocParms</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
ContractAddInfo	Add AddOrUpdate	<Data>/<AppInfo>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00030.002 – Add ContractAddInfo for contract added by xadvapl000100_00001.002</li> <li>• xadvapl000100_00031.002 – Update ContractAddInfo</li> </ul>
ContractAddress	Add AddOrUpdate Update Enable Disable	<Data>/<Address>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00010.002 – Add ContractAddress for contract added by xadvapl000100_00003.002</li> <li>• xadvapl000100_00011.002 – AddOrUpdate ContractAddress</li> <li>• xadvapl000100_00012.002 – Update ContractAddress</li> <li>• xadvapl000100_00013.002 – Disable ContractAddress</li> <li>• xadvapl000100_00056.002 – Enable ContractAddress</li> </ul>
ContractAffiliation	AddOrUpdate Disable	<Data>/ <AffiliationClient>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00014.002 – AddOrUpdate ContractAffiliation – Add linked client from application xadvapl000100_00014.002 for contract from xadvapl000100_00003.002</li> <li>• xadvapl000100_00015.002 – Disable ContractAffiliation</li> <li>• xadvapl000100_00044.002 – Add ContractAffiliation with new client</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
ContractAuthMethod	Add AddOrUpdate Disable	<Data>/<AuthMethod>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00016.002 – Add ContractAuthMethod for contract added by xadvapl000100_00003.002</li> <li>xadvapl000100_00017.002 – AddOrUpdate ContractAuthMethod</li> <li>xadvapl000100_00053.002 – Disable ContractAuthMethod</li> </ul>
ContractClassifier	AddOrUpdate Disable	<Data>/ <CustomerClassifiers>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00011.015 – Disable ContractClassifier for future dates</li> </ul>
ContractParameter	AddOrUpdate Disable	<Data>/ <CustomerParameters>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00055.002 – Set ContractParameter</li> <li>xadvapl000100_00058.002 – Disable ContractParameter</li> </ul> Acquiring: <p>xadvapl000100_00058.002 – Disable ContractParameter</p>
CustomerAuthMethod	Add AddOrUpdate Disable	<Data>/<AuthMethod>	

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Order	ActivatePersonal ActivateIndividual ActivateStandard Disable	<Data>/<StandOrder>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00018.002 – Activate Personal Order for contract added by xadvapl000100_00001.002</li> <li>• xadvapl000100_00019.002 – Disable Order</li> </ul>
Preferred	Add AddOrUpdate Disable	<Data>/<Preferred>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00020.002 – Add Preferred for contract added by xadvapl000100_00003.002</li> <li>• xadvapl000100_00021.002 – AddOrUpdate Preferred</li> <li>• xadvapl000100_00022.002 – Disable Preferred</li> </ul>
PaymentReceiver	Add AddOrUpdate Update	<Data>/ <PaymentReceiver>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00006.027 – AddOrUpdate individual payment receiver for client</li> <li>• xadvapl000100_00007.027 – Add individual payment receiver for client</li> <li>• xadvapl000100_00008.027 – Update individual payment receiver for client</li> </ul>
ClientCounterparty	Add AddOrUpdate Update	<Data>/<Counterparty>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00007.031 – Add ClientCounterparty</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
ContractCounterparty	Add AddOrUpdate Update	<Data>/<Counterparty>	Issuing: <ul style="list-style-type: none"><li>• xadvapl000100_00005.031 – Add ContractCounterparty</li></ul>
Relation	Update	<Data>/<CardRelation>	Issuing: <ul style="list-style-type: none"><li>• xadvapl000100_00006.004 – Add client and issuing contract to use it as base contract in relation</li><li>• xadvapl000100_00007.004 – Add Related Card added by xadvapl000100_00004.002 to base contract added by xadvapl000100_00006.004</li><li>• xadvapl000100_00008.004 – Update Relation</li></ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Instalment	Add Update Activate EarlyRepayment CancelEarlyRepayment PaymentHolidays Close	<Data>/<Instalment> <Data>/ <InstalmentEarlyRepayment> <Data>/ <InstalmentPaymentHolidays>	Issuing: <ul style="list-style-type: none"><li>• xadvapl000100_00005.033 – Add instalment by transaction</li><li>• xadvapl000100_00006.033 – Update instalment</li><li>• xadvapl000100_00007.033 – Add instalment</li><li>• xadvapl000100_00008.033 – Partial EarlyRepayment instalment with KeepInstalmentNumber recalculation</li><li>• xadvapl000100_00010.033 – Partial EarlyRepayment instalment with KeepInstalmentAmount recalculation</li><li>• xadvapl000100_00012.033 – Full EarlyRepayment instalment</li><li>• xadvapl000100_00014.033 – PaymentHolidays instalment</li><li>• xadvapl000100_00015.033 – Close instalment</li></ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Tariff	Add	<Data>/<Tariffs>	<p>Issuing:</p> <ul style="list-style-type: none"> <li>• xadvapl000100_00032.002 – Add Billing Tariff for contract added by xadvapl000100_00003.002</li> <li>• xadvapl000100_00033.002 – Add Instalment Fee Tariff</li> <li>• xadvapl000100_00034.002 – Add Instalment Tariff</li> <li>• xadvapl000100_00035.002 – Add Interest Tariff</li> <li>• xadvapl000100_00036.002 – Add Interest Tax Tariff</li> <li>• xadvapl000100_00037.002 – Add Service Limit Tariff</li> <li>• xadvapl000100_00038.002 – Add Service Tariff</li> <li>• xadvapl000100_00039.002 – Add Service VD Tariff</li> <li>• xadvapl000100_00040.002 – Add Usage Limit Tariff</li> <li>• xadvapl000100_00041.002 – Add Ageing Tariff</li> </ul>
Usage	ActivatePersonal ActivateStandard Enable Disable AddIndividual	<Data>/<Usage>	<p>Issuing:</p> <ul style="list-style-type: none"> <li>• xadvapl000100_00023.002 – ActivatePersonal Usage for contract added by xadvapl000100_00003.002</li> <li>• xadvapl000100_00024.002 – ActivatePersonal Usage set maxnumber=99999999 to imitate setting max usage value</li> <li>• xadvapl000100_00025.002 – ActivateStandard Usage with parm ResetCurrentCounters=Y</li> <li>• xadvapl000100_00026.002 – Disable Usage</li> <li>• xadvapl000100_00051.002 – AddIndividual Usage overriding template parameters</li> </ul>

Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
CustomerClassifier	AddOrUpdate Disable	<Data>/ <CustomerClassifiers>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00015.001 – AddOrUpdate CustomerClassifier for client added by xadvapl000100_00001.001</li> <li>• xadvapl000100_00057.001 – Disable CustomerClassifier with code INS_ASSIST for contract added by xadvapl000100_00001.001</li> </ul>
CustomerIdentifier	AddOrUpdate Disable	<Data>/ <CustomerIdentifiers>	Reserved for system use.
Event	Add Disable	<Data>/<QueEvent>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00027.002 – Add Event for contract added by xadvapl000100_00003.002</li> </ul>
Limit	Update Disable	<Data>/<SetLimit>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00028.002 – Update Limit for contract added by xadvapl000100_00003.002</li> <li>• xadvapl000100_00045.002 – Set temporary Limit for contract</li> <li>• xadvapl000100_00019.030 – Disable temporary Limit in future</li> </ul>
InstalmentLimit	Update	<Data>/ <SetInstalmentLimit>	Issuing: <ul style="list-style-type: none"> <li>• xadvapl000100_00001.033 – Update InstalmentLimit</li> </ul>



Object Type	Action types permitted for this type object	Key aggregate of the UFX application	File examples
Status	Update	<Data>/<SetStatus>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00029.002 – Update Status for contract added by xadvapl000100_00003.002</li> </ul>
StopList	Add Delete	<Data>/<StopList>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00057.002 – Delete Card from Stop List with RequestGroup</li> </ul>
ContractGroup	Add Update Lock Close	<Data>/ <ContractGroup>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00001.035 – Add ContractGroup with owner contract from xadvapl000100_00001.002</li> <li>xadvapl000100_00002.035 – Update ContractGroup</li> <li>xadvapl000100_00003.035 – Lock ContractGroup</li> <li>xadvapl000100_00004.035 – Close ContractGroup</li> </ul>
ContractGroupAffiliation	Add Update Close Delete	<Data>/ <ContractGroupAffiliation>	Issuing: <ul style="list-style-type: none"> <li>xadvapl000100_00005.035 – Add ContractGroupAffiliation for contract group added by xadvapl000100_00001.002</li> <li>xadvapl000100_00006.035 – Update ContractGroupAffiliation</li> <li>xadvapl000100_00007.035 – Close ContractGroupAffiliation</li> <li>xadvapl000100_00008.035 – Delete ContractGroupAffiliation</li> </ul>
DeviceParms	Delete	<Data>/<Contract>	

## 6. Application Workflow Modes

In the Advanced Applications module, the following application workflow modes are possible:

- "Workflow" Applications are processed through stages according to the selected workflow strategy.
- "No workflow" Work in this mode is performed according to a scenario providing for only two stages: import and subsequent acceptance (or decline) of an application.



Work with "workflow" and "no workflow" modes in the Advanced Applications module is described in the document "Advanced Applications R2".

Without the Advanced Applications module, in the issuing and acquiring modules "no workflow" is only available for processing applications.

Applications in the issuing module is processed in the "Issuing → Applications Batch Interface" menu group that contains the following menu items:

- "Issuing Application Import (No WF)" – import issuing module applications.
- "Issuing Applications – Accept (No WF)" – accept issuing module applications.
- "Issuing Applications – Accept Parallel (No WF)" – accept issuing module applications in parallel.
- "Applications Response" (No WF) – export files with a report on application processing results.
- "Applications Monitoring (No WF)" – monitoring application processing is performed by a user with administrator privileges.

Applications in the acquiring module is processed in the "Acquiring → Applications Batch Interface" menu group that contains the following menu items:

- "Acquiring Application Import (No WF)" – import acquiring module applications.
- "Acquiring Applications – Accept (No WF)" – accept acquiring module applications.
- "Acquiring Applications – Accept Parallel (No WF)" – accept acquiring module applications in parallel.
- "Applications Response" (No WF) – export files with a report on application processing results.
- "Applications Monitoring (No WF)" – monitoring application processing is performed by a user with administrator privileges.

The "no workflow" mode is used to solve the following tasks:

- Card migration.
- Automatic processing of a large number of the same type of applications according to a template that provides for export and subsequent acceptance of applications.



The "no workflow" mode has the following limitations:

- Not possible to manually edit applications.
- No application approval stage.
- All applications regardless of processing results end up at the "Close" stage of processing.
- No issuing application update mode.
- No journal of the current application's workflow history.
- No verification of system user rights to execute actions to process applications.
- No possibility to work with applications to manage system users.

## 7. Application Workflow

In "workflow" mode, application workflow is separated into stages and includes the entry of necessary data, the checking of data and execution of actions for sending the application to the required stage of the workflow strategy.



The "workflow" mode is only available in the Advanced Applications R2 module.


In "no workflow" mode, application workflow only includes approving or declining an application after it has been imported. When an application is accepted, the corresponding changes are entered in the database: new clients and new contracts are registered, contract and client parameters are changed, etc.

After processing of an application is completed, it is assigned the closed status (*Posting Status = Posted*), after which it is filtered from the list of applications to be processed.

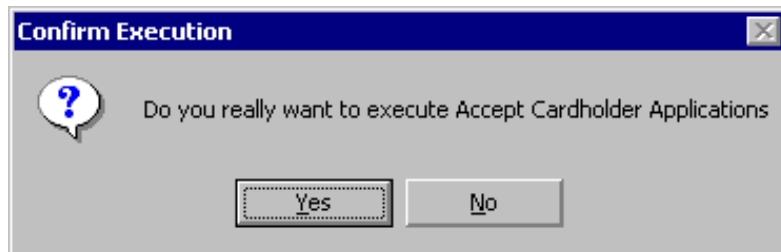
### 7.1 Accepting Applications

To accept applications in the issuing module, use the menu item "Issuing → Applications Batch Interface → Issuing Applications – Accept (No WF)".

To accept applications in the acquiring module, use the menu item "Acquiring → Applications Batch Interface → Acquiring Applications – Accept (No WF)".

 Menu items that are used to accept applications in the Advanced Applications R2 module are described in the document "Advanced Applications R2".


Before starting the procedure to accept a processed application, the system generates a request for the user to confirm execution of the procedure.



*Request to confirm execution of the procedure to accept processed applications*

The system will run the procedure after user confirmation.

The results of the procedure are available for analysis by selecting the menu item "Full → Process Log → Process Log".

 At the application acceptance stage, the WAY4 checks the status of Products, Account Schemes and Service Packages.



A subordinate application can be accepted separately. To do so, in the ADD\_DATA field of the subordinate application, specify the SPLIT tag in the following format:

```
SPLIT=Y;
```

As a result, when the procedure to accept the parent and subordinate application is executed, only the contract for the higher-ranking application is registered in the database, and the subordinate application as a separate application gets a link to the registered contract. To register a contract according to the subordinate application, accept the subordinate application.



The process for accepting applications can be executed in parallel. This functionality is used when a large number of applications must be accepted. Menu items "Issuing → Applications Batch Interface → Issuing Applications – Accept Parallel (No WF)" (for the issuing module) and "Acquiring → Applications Batch Interface → Acquiring Applications – Accept Parallel (No WF)" (for the acquiring module) allow issuing and acquiring applications to be accepted in parallel.

Configuration of parallel execution must be set up in advance (Full → Configuration Setup → Main Tables → Process Parameters), see the document "Running Processes in Parallel".

## 7.2 Monitoring Application Workflow

Users with administrator privileges monitor Issuing application workflow by selecting the user menu item "Issuing → Applications Batch Interface → Applications Monitoring (No WF)".

Users with administrator privileges monitor Acquiring application workflow by selecting the user menu item "Acquiring → Applications Batch Interface → Applications Monitoring (No WF)".



Menu items that are used to monitor application workflow in the Advanced Applications R2 module are described in the document "Advanced Applications R2".

The form for monitoring issuing application workflow contains information on application parameters of all financial institutions in Way4(see [figure](#)).

Applications Monitoring (No WF)											<< < > >>		63 of 397		X
	Product Category	Financial Inst.	Branch	Reg Number	Date	Object	Action	Object For	Object For Client	Object For Contract	Officer	Posting Status	Outward Status	^	
	Acquiring	Principal		81024195518920	12/04/18 11:39:15	Contract Address	Enable	Contract		34345566		Posted	Processed		
	Acquiring	Principal		81024190418890	12/04/18 11:38:24	Contract Address	Disable	Contract		34345566		Posted	Processed		
	Acquiring	Principal		81024120918870	12/04/18 11:26:49	Contract Address	Disable	Contract		001-C-809267		Declined	Rejected		
	Acquiring	Principal		81024090118850	12/04/18 11:21:41	Contract Address	Disable	Contract		001-C-809267		Declined	Rejected		
	Acquiring	Principal		81024062618820	12/04/18 11:17:06	Client Address	Disable	Client	WILLIAM SMITH			Posted	Processed		
	Acquiring	Principal		81024025318790	12/04/18 11:10:53	Client Address	Update	Client	WILLIAM SMITH			Posted	Processed		
	Acquiring	Principal		81016630518740	11/04/18 18:25:05	Client Address	Disable	Client	WILLIAM SMITH			Posted	Processed		
	Acquiring	Principal		81016624918710	11/04/18 18:24:09	Client Address	Add	Client	WILLIAM SMITH			Posted	Processed		
➔	Acquiring	Principal		81016615818690	11/04/18 18:22:38	Contract Address	Add	Contract		001-C-644573		Declined	Rejected		
	Acquiring	Principal		81016610218670	11/04/18 18:21:42	Contract Address	Add	Contract		001-C-809267		Declined	Rejected		
	Acquiring	Principal		81016608018650	11/04/18 18:21:20	Contract Address	Add	Contract		001-C-809267		Declined	Rejected		
	Acquiring	Principal		81016433218620	11/04/18 17:52:12	Client Address	Enable	Client	WILLIAM SMITH			Posted	Processed		
	Acquiring	Principal		81016429118590	11/04/18 17:51:31	Client Address	Disable	Client	WILLIAM SMITH			Posted	Processed		
		Principal		81006870018420	10/04/18 19:05:00	Contract	Update	Contract		55667788		Posted	Processed		
	Acquiring	Principal		81006691218390	10/04/18 18:35:12	Client	Add Or Up	Client				Declined	Rejected		
	Acquiring	Principal		81005245418190	10/04/18 14:34:14	Client Memo	Add	Client	TEST MERCHANT			Posted	Processed		
	Acquiring	Principal		80996552918050	09/04/18 18:12:09	Client Memo	Update	Client	WILLIAM SMITH			Posted	Processed	▼	
Ins		Del		Query		Address		Sub Appl		Load Errors		Clear Fields		Proc Mess	

For for monitoring application workflow

Form's fields indicating the current application state:

- *Posting Status* – workflow stage status:
  - "Loaded" – the application is registered in the Advanced Applications module but no actions have been taken to process it.
  - "Posted" – the application has been successfully processed and posted.
  - "Declined" – the application has been declined by the user or the system at a workflow stage.
- *Posting Date* – date, when the application status has been changed to "Posted" or "Declined".
- *Officer* – officer responsible for the application at the given workflow stage.
- *Outward Status* – status of exporting the application.
  - "Waiting" – the application was imported from a file and is not intended for export.
  - "Processed" – the application passed the Accept procedure and is ready to be exported.
  - "Rejected" – the application was rejected by a user or WAY4 at a workflow stages.



Fields in the form for monitoring application workflow in the Advanced Applications R2 module are described in the document "Advanced Applications R2".

The set of buttons in the applications monitoring form depends on the type of application selected from the list. The form may contain the following buttons to open subordinate forms:

- [History] – opens a form with the history of this application's workflow stages.

Activity History for 555								<< < > >> 1 of 1 b x	
	ID	Activity Date	Is System	Performed By	Activity	Result	Comment Text	Move from Step	Move to Step
→	501	25/07/11 17:12:49	Yes		System Decline Application			Online Load	Declining Step

Query



### History of actions with the application

- [Load Errors] – opens a form with information about errors that occurred when importing this application. The value in the *Error Status* field of this form can be edited. This field may contain the following values:
  - "Waiting" – an error occurred when importing the application from the file. An application with this value in the *Error Status* field is not processed further. For its further processing to be possible, the "Checked" or "Skipped" value must be set in the *Error Status* field.
  - "Checked" – the error that occurred when loading the application has been eliminated.
  - "Skipped" – the error that occurred when loading the application should be skipped.

Load Errors for 134554							<< < > >>	3 of 4	b x
	Date	Officer	Field Group	Field Name	Field Value	Error Status	Error Message		
	27/12/11 17:16:02	SUPERUSER				Waiting	TariffType: Not matched value <<INSTS>>		
	27/12/11 17:16:02	SUPERUSER				Waiting	Currency: Not matched value <<EUR>>		
→	27/12/11 17:16:02	SUPERUSER	Tariff	CURR	EUR	Waiting	Currency: Not matched value <<EUR>>		
	27/12/11 17:16:02	SUPERUSER	Tariff	TARIFF_TYPE	INSTS	Waiting	TariffType: Not matched value <<INSTS>>		

### Information about errors when loading this application

- [Clear Fields] – opens a form with information about the object fields whose values will be set to null using this application.

Clear Fields Log for TESTAPP_ADD_CLIENT_20111011_1				<div>&lt;&lt; &lt; &gt; &gt;&gt;</div>		1 of 2		<div>b x</div>	
	Date	Officer	Object Type	Field Name					
→	11/10/11 17:44:05	SUPERUSER	Client	Security Name					
	11/10/11 17:44:05	SUPERUSER	Client	Middle Name					
<div>Ins Del Query</div>									

### List of fields to be cleared

- [Proc Mess] – opens the form for viewing the list of all system messages generated when processing this application.

				<< < > >>	1 of 5	b x
ID	Message Title	Type	Date	Object Type	Object ID	
→ 502084	Release after decline result: IAdv Application released	Debug	15/08/12 14:14:24	ADV_APPL	23085	
502081	Application decline result: Adv Application has been declined	Information	15/08/12 14:14:24	ADV_APPL	23085	
502080	Decline an Application with ID:23085	Debug	15/08/12 14:14:24	ADV_APPL	23085	
502079	Application decline message:		15/08/12 14:14:24	ADV_APPL	23085	
502078	CUST_ADV_EXCEPTION_HANDLER RetCode: , RetClass: , ErrMsg:	Debug	15/08/12 14:14:24	ADV_APPL	23085	
Query    Msg Desc    Full Info						

List of system messages for an application

- [Device Parms] – opens the form with a list of channels for which records about redefinition of device parameters must be deleted (available for applications with Application Type = "DeviceParms" only).

Device Parms for 92145807621380		<< < > >>	1 of 1	b x
For Channel				
→ MC				
Query    Clear Fields				

List of channels for which records about redefinition of device parameters must be deleted

## 8. Importing and Exporting Applications

In the Advanced Applications module, applications can be imported and exported. This is possible in two modes:

- "workflow"
- "no workflow".

In the issuing and acquiring modules, applications in "no workflow" mode can only be imported.

### 8.1 Importing Applications

Information about applications can be imported from XML format files in the following modules:

- Advanced Applications R2.
- Issuing Module.
- Acquiring Module.

XML files can be created by an external system according to client applications and by the Advanced Applications R2 module operating in another Way4 instance.

Imported files must be put in standard file exchange directories (see the section "Structure of File Exchange Directories" of the document "CBS Interface").

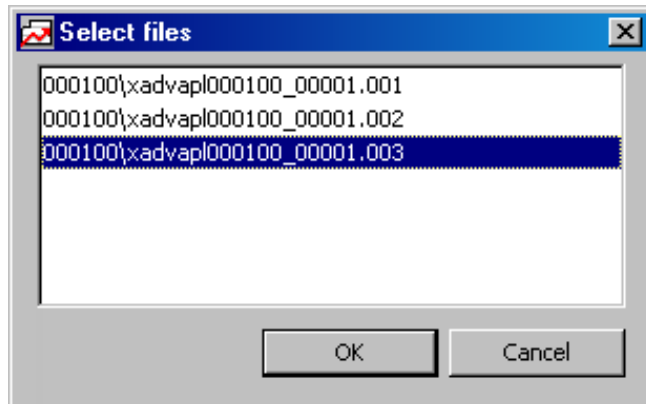
To import files in the issuing module, use the menu item "Issuing → Applications Batch Interface → Issuing Application Import (No WF)".

To import files in the acquiring module, use the menu item "Acquiring → Applications Batch Interface → Acquiring Application Import (No WF)".



Menu items that are used to import files in the Advanced Applications R2 module are described in the document "Advanced Applications R2".

After these menu items are started, a dialogue window for selecting files to be imported will be displayed.

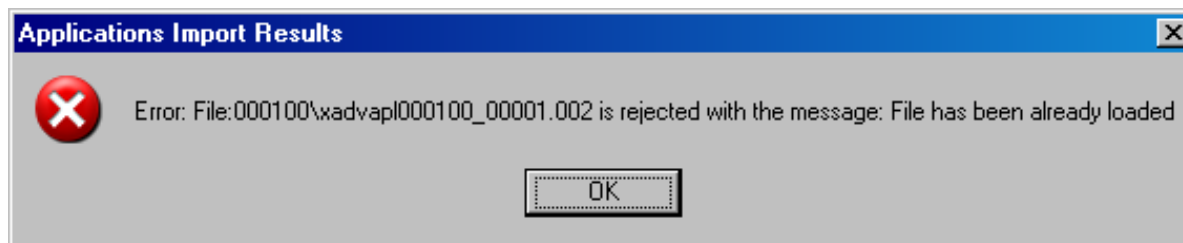


*Dialogue window to select imported files*

Files may be selected for import from this list by holding the <Ctrl> key and clicking on the desired files.

After the required files have been selected, click the [OK] button.

If the selected file has already been imported, an error message will be displayed.



*A message about an attempt to import a file that has been already imported*

According to the results of importing the file, the issuing or acquiring module generates a response file that is placed by the system in the standard outgoing file directory (see the section "Structure of File Exchange Directories" in the document "CBS Interface"). This file contains information about applications that were not imported for any reasons. A response file format is described in the section "[File Formats](#)".



Note that application can be imported in deferred response generation mode using the "DEFERRED\_RESPONSE = Y" parameter of the "XML Applications Import" pipe (for more information, see the section ""XML Applications Import" Pipe Parameters").

## 8.2 Exporting XML Response Files

When importing applications from XML files, the issuing and acquiring modules allow the creation of response files containing results of application processing for sending to the systems that sent the files.

To export response files from the issuing module, use the menu item "Issuing → Applications Batch Interface → Applications Response (No WF)".

To export response files from the acquiring module, use the menu item "Acquiring → Applications Batch Interface → Applications Response (No WF)".



Menu items that are used to export response files from the Advanced Applications module is described in the document "Advanced Applications R2".

A response file is generated if the import pipe is run in deferred response generation mode (parameter "DEFERRED\_RESPONSE = Y" of the "XML Applications Import" pipe, for more information, see the section ""XML Applications Import" Pipe Parameters").

When an application file is imported, and a format error or an error of importing the application to the ADV\_APPL table occurs, the file is rejected, and the import pipe generates a response file regardless of the DEFERRED\_RESPONSE parameter's value.

## 9. Working with Applications in an HA Secondary Node

It is possible to work with applications in an HA secondary node in two modes:

- "workflow"
- "no workflow".



The "workflow" mode is only available in the Advanced Applications R2 module.

When importing applications in an HA secondary node: In "no workflow" mode (instead of being accepted) applications are approved). After synchronization in the primary node, the application will have the "Waiting" status and can be accepted. The user will get the message "Application is approved successfully and will be processed later". For correct operation, the global parameter "APPL\_NON\_SAFE\_ON\_SECONDARY = APPROVE" must be set in Way4 (the default value is "DECLINE"). Otherwise, applications will be declined (Posting Status = "Declined").

When processing applications in the primary node (the contract was authorized in a secondary node), applications will get the "Waiting" status during an attempt to accept them. Moreover:

- When a user manually accepts a single application, Way4 shows the warning with code 2288: "Application is skipped: The service <Service\_Name> is not active on this node "Node\_Name".
- In batch accept of applications, WAY4 checks the number of unprocessed applications remaining and if there are any, the following message will be added to the Process Log:

```
"<NotProcessedCount> from <SummaryCount> approval applications were not processed.  
Application contracts can be not active on this node,  
check "OpenWay → Distributed Processing → Configuration Setup → Primary Node Routing Check"
```

If working in the "no workflow" mode, unprocessed applications can be reaccepted. The application acceptance process will only be successful after contract authorization is performed in the primary node again. Before accepting applications, it is recommended to make sure that at the present time all contracts are being processed in the current node. To perform the check, use the menu item "Distributed Processing → Configuration Setup → Primary Node Routing Check".



Settings that must be made when working in "workflow" mode are described in the section "Working with Applications in an HA Secondary Node" of the document "Advanced Applications R2".

If applications imported by web services in "no workflow" mode cannot be accepted immediately (contracts in the current node are unavailable, or accepting applications in a secondary HA node is not permitted):

- Applications for urgent operations (change status, process an Event, set a classifier, reset a PIN counter) will be declined (*Posting Status* = "Declined"). The appropriate error message (response code "2288" or "2270") will be added to the response file.
- Applications for non-urgent operations will get the "Waiting" status and will be processed during the next process for accepting applications.

For more information about the HA platform, see the document "WAY4™ HA Cluster. Functional Specification".



## 10. Tags used in application processing

Tags can be split into two groups:

- *Standard application tags* – UFX tags used when processing applications in XML format to manage a certain process (for example, to enable the mode for deferred acceptance of a subordinate application, to change a parent contract). Rules for using standard tags in applications are given in the section "Use of Standard Application Tags (UFX Tags) when Processing Applications". UFX format offers a wide range of possibilities for managing application processing and for passing additional non-standard information about "Client" and "Contract" objects, that expand the standard set of fields and can be used in custom procedures.
- *Custom tags* – these tags can be configured for several table fields according to business requirements.

It is recommended to enter and edit tags in the fields listed in the "List of fields that support tags, to which control structures are applicable when processing applications" table only with XML applications using the special control structures "TAG=Y;" and "TAGS\_TO\_REMOVE".

Examples of entering and editing tags are given in the section "Managing Custom Tags when Processing Applications".



Control structures "TAG=Y;" and "TAGS\_TO\_REMOVE" are not applicable when tagged data are manually entered through screen forms. An exception is manual entering of tagged data in the *Receiver Details 1* and *Receiver Details 2* fields of the "Counterparty" and "Counterparty for Order" forms (see the subsections "Counterparty" and "Payment Order" of the section "Creating Applications" in the document "Advanced Applications R2"). When tagged data is entered in these fields, use "TAG=Y;" and "TAGS\_TO\_REMOVE" structures.



Tagged data can be entered through screen forms only in the Advanced Applications module.

*List of fields that support tags, to which control structures are applicable when processing applications.*

Table	Field that supports storing tagged data
CLIENT	ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04
ACNT_CONTRACT	ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04
PREFERRED	CUSTOM_PARMs
USAGE_TEMPL	USER_ADD_INFO
PAYM_REC_PARTY	ADD_DATA
APPL_INFO	ADD_INFO_01 ADD_INFO_02 ADD_INFO_03 ADD_INFO_04
PAYM_REC	RECEIVER_DETAILS_1 RECEIVER_DETAILS_2

## 10.1 Use of Standard Application Tags (UFX Tags) when Processing Applications

This section describes rules for using standard tags in applications – UFX tags used when processing applications in XML format to manage a certain process.

### 10.1.1 Parameters that affect processing applications for any object type

Name	Value	Comments	UFX element
Split	"Yes"	Used for deferred acceptance of a subordinate application. When the value is set to "Yes", the subordinate application will be processed as an independent one.	<pre>&lt;Application&gt;   &lt;Data&gt;...&lt;/Data&gt;   &lt;AddData&gt;     &lt;Split&gt;Yes&lt;/Split&gt;   &lt;/AddData&gt; &lt;/Application&gt;</pre>

Name	Value	Comments	UFX element
DuplicateCount	<number of duplicates>	Used when an application (and child applications) is duplicated, for example, when several identical cards must be created.	<pre>&lt;Application&gt;   &lt;ObjectType&gt;Card&lt;/ObjectType&gt;   &lt;Data&gt;...&lt;/Data&gt;   &lt;AddData&gt;     &lt;DuplicateCount&gt;10&lt;/DuplicateCount&gt;   &lt;/AddData&gt; &lt;/Application&gt;</pre>

## 10.1.2 Parameters that affect processing applications for a certain object type

Name	Value	Comments	UFX element
ChangeMain	"Yes" "No"	Used to allow a parent contract to be changed with an application. If the application is intended to create a parent contract and as a subcontract add another contract earlier belonging to a different contract tree, the value of the tag should be ChangeMain = "Yes".	<pre> &lt;Application&gt;   &lt;Data&gt;     &lt;Contract&gt;       &lt;AddContractInfo&gt;         &lt;ChangeMain&gt;Yes&lt;ChangeMain&gt;       &lt;/AddContractInfo&gt;     &lt;/Contract&gt;   &lt;/Data&gt;   &lt;AddData&gt;...&lt;/AddData&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
ChangeClient	"All" "This" "Down" "AllWithLiability" "DownWithLiability"	<p>The tag is used to choose the mode for changing a client for a contract tree by using an application:</p> <ul style="list-style-type: none"> <li>For contract hierarchy with the Main/Sub" relation type:               <ul style="list-style-type: none"> <li>"This" – the client will be changed for entire contract tree.</li> <li>"This" – the client will be changed for a contract to which the application belongs (starting from version 03.39.30).</li> <li>"Down" – the client will be changed for all contracts in the hierarchy that are under the contract to which the application belongs.</li> </ul> </li> <li>For contract hierarchy with the Main/Sub" or "Liability" relation type:               <ul style="list-style-type: none"> <li>"AllWithLiability" – the client will be changed for entire contract tree regardless of the relation type between contracts in the hierarchy.</li> <li>"DownWithLiability" – the client will be changed for all contracts in the hierarchy that are under the contract to which the application belongs regardless of the relation types between contracts in the hierarchy.</li> </ul> </li> </ul>	<pre> &lt;Application&gt;   &lt;Data&gt;     &lt;Contract&gt;       &lt;AddContractInfo&gt;         &lt;ChangeClient&gt;All&lt;ChangeClient&gt;       &lt;/AddContractInfo&gt;     &lt;/Contract&gt;   &lt;/Data&gt;   &lt;AddData&gt;...&lt;/AddData&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
		<p>The tag is used in an application tree in which the parent application is used to create a client, and the subordinate application specifies the contract whose data are updated.</p> <p>The value of the tag ChangeClient = "All"/"This"/"Down"/"AllWithLiability"/"DownWithLiability" should be specified in the subordinate application used to work with the contract.</p>	
ChangeInstitution	<financial institution identifier>	<p>The tag makes it possible to change the institution for a contract to which the application belongs. This tag is used together with the ChangeInstitutionType tag that sets how an institution will be identified.</p>	<pre> &lt;Application&gt;   &lt;Data&gt;     &lt;Contract&gt;       &lt;AddContractInfo&gt;         &lt;ChangeInstitution&gt;512&lt;ChangeInstitution&gt;       &lt;/AddContractInfo&gt;     &lt;/Contract&gt;   &lt;/Data&gt;   &lt;AddData&gt;...&lt;/AddData&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
ChangeInstitutionType	"B" "C" "N" "I"	<p>The tag determines how the financial institution will be identified when changing the institution for a contract:</p> <ul style="list-style-type: none"> <li>• "B" – institution identified by branch_code field value (default).</li> <li>• "C" – institution identified by cb_code field value.</li> <li>• "N" – institution identified by bank_code field value.</li> <li>• "I" – institution identified by id field value.</li> </ul> <p>This tag is used together with the ChangeInstitution tag allowing a financial institution to be changed for a contract.</p>	<pre> &lt;Application&gt;   &lt;Data&gt;     &lt;Contract&gt;       &lt;AddContractInfo&gt;         &lt;ChangeInstitutionType&gt;C&lt;ChangeInstitutionType&gt;       &lt;/AddContractInfo&gt;     &lt;/Contract&gt;   &lt;/Data&gt; &lt;/AddData&gt;...&lt;/AddData&gt; &lt;/Application&gt; </pre>



Name	Value	Comments	UFX element
ResetCurrentCounters	"Yes" "No"	The tag makes it possible to reset the counter of the usage limiter to which the application belongs.	<pre> &lt;Application&gt;   &lt;ObjectType&gt;Usage&lt;/ObjectType&gt;   &lt;ActionType&gt;ActivateStandard&lt;/ ActionType&gt;   &lt;ObjectFor&gt;...&lt;/ObjectFor&gt;   &lt;Data&gt;     &lt;Usage&gt;       &lt;AddData&gt;         &lt;Parm&gt;           &lt;ParmCode&gt;ResetCurrentCounters           &lt;/ParmCode&gt;           &lt;Value&gt;Y&lt;/Value&gt;         &lt;/Parm&gt;       &lt;/AddData&gt;     &lt;/Usage&gt;   &lt;/Data&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
ErasePIN	"Yes" "No"	The tag makes it possible to clear a card's PIN by using an application.	<pre> &lt;ProduceCard&gt;   &lt;AddData&gt;     &lt;Parm&gt;       &lt;ParmCode&gt;ErasePIN&lt;/ParmCode&gt;       &lt;Value&gt;Yes&lt;/Value&gt;     &lt;/Parm&gt;   &lt;/AddData&gt; &lt;/ProduceCard&gt; </pre>
MOBILE_CONTRACT_ID T	<identification scheme type code>	<p>The MOBILE_CONTRACT_IDT tag is used to synchronise the identification scheme used to search for a contract if an application was used to change the client's phone number.</p> <p>The new identification scheme is created for the card contract that is currently active if an application to change the client's address with the corresponding address type was created.</p> <p>The code for the identification scheme type (Authentication Module → Identification Types) is set in the tag. If the tag value is not set, the default value "SMS" is used.</p>	The tag is specified in the address type in the <i>Add Info</i> field of the Address Types table (Full → Configuration Setup → Client Classifiers → Address Types). The code for the identification scheme type (Authentication Module → Identification Types) is set in the tag.

Name	Value	Comments	UFX element
DuplicateCount	<number of duplicates>	Used when an application (and child applications) is duplicated, for example, when several identical cards must be created.	<pre> &lt;Application&gt;   &lt;ObjectType&gt;Card&lt;/ObjectType&gt;   &lt;Data&gt;...&lt;/Data&gt;   &lt;AddData&gt;     &lt;DuplicateCount&gt;10&lt;/DuplicateCount&gt;   &lt;/AddData&gt; &lt;/Application&gt; </pre>
CardInitialLock	"Yes"	When the value is "Yes", a plastic that has been created gets the "Locked" status. It is recommended to use this setting in card subtypes.	<p>Use for applications with the "Card" or "Contract" object type ("Data/Contract/ProductionParms"). In UFX format this tag is sent as:</p> <pre> &lt;Application&gt;   &lt;ObjectType&gt;Card&lt;/ObjectType&gt;   &lt;Data&gt;...&lt;/Data&gt;   &lt;AddData&gt;     &lt;CardInitialLock&gt;Yes&lt;/CardInitialLock&gt;   &lt;/AddData&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
ChangeServiceGroup	"Yes"	Used to enable inheritance of a client's <i>Service Group</i> to all this client's contracts. Inheritance works to clear the <i>Service Group</i> field and to fill it in.	<p>The <i>Service Group</i> field is filled in with:</p> <pre> &lt;Application&gt;   &lt;ObjectType&gt;Client&lt;/ObjectType&gt;   &lt;ActionType&gt;Update&lt;/ActionType&gt;   &lt;Data&gt;     &lt;Client&gt;       &lt;ServiceGroup&gt;TEST_SERV_GROUP&lt;/ServiceGroup&gt;     &lt;/Client&gt;   &lt;/Data&gt; &lt;/Application&gt; </pre> <p>To clear the <i>Service Group</i> field:</p> <pre> &lt;Application&gt;   &lt;ObjectType&gt;Client&lt;/ObjectType&gt;   &lt;ActionType&gt;Update&lt;/ActionType&gt;   &lt;Data&gt;     &lt;Client&gt;       &lt;ServiceGroup&gt;*#N&lt;/ServiceGroup&gt;     &lt;/Client&gt;   &lt;/Data&gt; &lt;/Application&gt; </pre>

Name	Value	Comments	UFX element
			<pre> &lt;/Client&gt; &lt;/Data&gt; &lt;/Application&gt; </pre>
EXPLICIT_PARMS	"Yes" "No"	<p>When the value is "Y", device parameters (DeviceParms) will be saved for an acquiring contract in the device_parms table.</p> <p>Otherwise, the &lt;DeviceDocParms&gt; section without the &lt;Channel&gt; element will be inherited by a contract without creating a record in the device_parms table.</p> <p>For device contracts, this section is always saved in the device_parms table.</p>	<pre> &lt;Contract&gt;   &lt;DeviceInfo&gt;     &lt;DeviceDocParms&gt;       &lt;AddData&gt;         &lt;Parm&gt;           &lt;ParmCode&gt;EXPLICIT_PARMS&lt;/ParmCode&gt;           &lt;Value&gt;Y&lt;/Value&gt;         &lt;/Parm&gt;       &lt;/AddData&gt;     &lt;/DeviceDocParms&gt;   &lt;/DeviceInfo&gt; &lt;/Contract&gt; </pre>

Name	Value	Comments	UFX element
ProhibitDevParmsInheritance	"Yes"	<p>When the value is "Y", all device parameters (DeviceParms) for an acquiring contract will be deleted.</p> <p>Possible messages when processing the application:</p> <ul style="list-style-type: none"> <li>"Device Parameters overrides can only be deleted from acquiring contract" – this message appears if the tag to delete device parameters was added for a device contract, not an acquiring contract.</li> <li>"Device Parameters can not be set and cancelled concurrently" – this message appears if the application contains both the tag and records for creating device parameters.</li> </ul>	<pre> &lt;Application&gt;   &lt;ObjectType&gt;Contract&lt;/ObjectType&gt;   &lt;ActionType&gt;Update&lt;/ActionType&gt;   &lt;Data&gt;     &lt;Contract&gt;       &lt;AddContractInfo&gt;         &lt;ProhibitDevParmsInheritance&gt;Yes&lt;/ProhibitDevParmsInheritance&gt;       &lt;/AddContractInfo&gt;     &lt;/Contract&gt;   &lt;/Data&gt; &lt;/Application&gt; </pre>

## 10.2 Managing Custom Tags when Processing Applications

Applications must be used to enter and modify tags in fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing".

When importing applications, custom tags are edited using special control structures "TAG=Y;" and "TAGS\_TO\_REMOVE".

### 10.2.1 Example of adding tags using an application to create a client record

In this example, a new client record is created with tag fields that are filled in. Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field.

```
<Application>
  <RegNumber>...</RegNumber>
  <ObjectType>Client</ObjectType>
  <ActionType>Add</ActionType>
  <Data>
    <Client>
      <ClientType>...</ClientType>
      <ClientInfo>
        ...
      </ClientInfo>
      <AddInfo>
        <AddInfo01>TAG=Y;VAT_ELIGIBLE=Y;DATE_REG=20180104;</AddInfo01>
        <AddInfo02>VIP_POSITION=HEAD;</AddInfo02>
        <AddInfo03>text comment 1</AddInfo03>
        <AddInfo04>text comment 2</AddInfo04>
      </AddInfo>
    </Client>
  </Data>
</Application>
```

When this application is imported, a client record will be created for which client tagged fields are filled in: the *AddInfo01* and *AddInfo02* fields will be shown as tagged fields, and the *AddInfo03* and *AddInfo04* fields will be represented as text fields (see [figure](#)).

Add Info for XML\_AA\_01\_short

Client

Ivan

Ivanov

XML\_AA\_01\_num

Additional Info

VAT\_ELIGIBLE=Y;DATE\_REG=20180104;

00/00/0000

VIP\_POSITION=HEAD;

00/00/0000

text comment 1

text comment 2

Add Info 1
Add Info 2
Add Info 3
Add Info 4

Add Info 1 for XML\_AA\_01\_short

<<

<

>

>>

1 of 2

b

x

	Seq #	Tag	Value Data	Value Tag	Value Type	Comment Text	Is Ready
→	10	VAT_ELIGIBLE	Y	Tag Present	Unknown		Ready
	20	DATE_REG	20180104	Tag Present	Unknown		Ready

Ins

Del

Query

Do ...

Showing data in client tagged fields



When an application to add a new record is imported (*Action Type* = "Add"), it is not mandatory to use the control structure "TAG=Y;" when importing data to tagged fields. In the example above, tagged data are passed to the *AddInfo01* and *AddInfo02* fields and the structure "TAG=Y;" is only used for the *AddInfo01* field, even though data in both fields will be shown in the screen form as tags (see [figure](#)).



## 10.2.2 Example of using the "TAG=Y;" control structure

The "TAG=Y;" control structure is used to change tags in the fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing". The structure can be used when importing an application to change a record (*Action Type* = "Update"/"AddOrUpdate").



When an application to add a new record is imported (*Action Type* = "Add"), it is not mandatory to use the control structure "TAG=Y;" when importing data to tagged fields.

Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field:

```
TAG=Y;Tag1=Value1;...;TagN=ValueN;
```

The example below shows changing of the client record created in the example described in the section "[Example of adding tags using an application to create a client record](#)":

```
<Application>
  <RegNumber>...</RegNumber>
  <OrderDprt>0101</OrderDprt>
  <ObjectType>Client</ObjectType>
  <ActionType>Update</ActionType>
  <ObjectFor>
    <ClientIDT>
      <ClientInfo>
        <ClientNumber>...</ClientNumber>
        <ShortName>XML_AA_01_short</ShortName>
      </ClientInfo>
    </ClientIDT>
  </ObjectFor>
  <Data>
    <Client>
      ...
      <AddInfo>
        <AddInfo01>TAG=Y;VAT_ELIGIBLE=N</AddInfo01>
        <AddInfo03>new comment</AddInfo02>
      </AddInfo>
    </Client>
  </Data>
</Application>
```

As a result of import, the client record's *AddInfo01* and *AddInfo03* tagged fields will be updated. In the *AddInfo01* field, the value of one tag will change ("VAT\_ELIGIBLE=Y;" will change to "VAT\_ELIGIBLE=N;"). The text in the *AddInfo03* field will change (see [figure](#)).

Add Info for XML\_AA\_01\_short

Client

Ivan

Ivanov

XML\_AA\_01\_num

Additional Info

VAT\_ELIGIBLE=N;DATE\_REG=20180104;

00/00/0000

VIP\_POSITION=HEAD;

00/00/0000

new comment

text comment 2

Add Info 1
Add Info 2
Add Info 3
Add Info 4

Add Info 1 for XML\_AA\_01\_short

<<

<

>

>>

1 of 2

b

x

Seq #	Tag	Value Data	Value Tag	Value Type	Comment Text	Is Ready
10	VAT_ELIGIBLE	N	Tag Present	Unknown		Ready
20	DATE_REG	20180104	Tag Present	Unknown		Ready

Ins
Del
Query
Do ...

Showing data in client tagged fields after a client record has changed



It is not recommended to change the format of data (text or tagged) that was first used when data were entered in a field that supports tags. For example, if the field was initially filled in as a text field, if data must be changed in this field, only text format can be used for data.

## 10.2.3 Example of using the "TAGS\_TO\_REMOVE" control structure

The "TAGS\_TO\_REMOVE" control structure is used to delete tags in the fields from the "List of fields that support tags, to which control structures are applicable when processing applications" table in the section "Tags used in application processing". This structure can be used when importing an application to change a record (*Action Type* = "Update"/"AddOrUpdate").

The "TAGS\_TO\_REMOVE" control structure is used in pair with the "TAG=Y;" control structure (indicator that the field contains tags). Tags are specified without spaces, and a semicolon ";" is used after each tag name. If this syntax is not observed, the field will be interpreted as a text field:

```
TAG=Y;TAGS_TO_REMOVE=Tag1;TagN;
```

This example shows changing of the client record created in the example described in the section "[Example of adding tags using an application to create a client record](#)". The "VAT\_ELIGIBLE;" tag must be deleted from the *AddInfo01* tagged field:

```
<Application>
  <RegNumber>...</RegNumber>
  <OrderDprt>0101</OrderDprt>
  <ObjectType>Client</ObjectType>
  <ActionType>Update</ActionType>
  <ObjectFor>
    <ClientIDT>
      <ClientInfo>
        <ClientNumber>...</ClientNumber>
        <ShortName>XML_AA_01_short</ShortName>
      </ClientInfo>
    </ClientIDT>
  </ObjectFor>
  <Data>
    <Client>
      ...
      <AddInfo>
        <AddInfo01>TAG=Y;TAGS_TO_REMOVE=VAT_ELIGIBLE;</AddInfo01>
      </AddInfo>
    </Client>
  </Data>
</Application>
```

When this application is imported, the client tagged field *AddInfo01* will be updated. The "VAT\_ELIGIBLE=Y;" tag will be deleted from the list of tags in this field (see [figure](#)).

Add Info for XML\_AA\_01\_short

b
x

Client

Ivan
Ivanov
XML\_AA\_01\_num

Additional Info

DATE\_REG=20180104;
00/00/0000

VIP\_POSITION=HEAD;
00/00/0000

text comment 1

text comment 2

Add Info 1
Add Info 2
Add Info 3
Add Info 4

Add Info 1 for XML\_AA\_01\_short

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1 of 1
b
x

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Query
Do ...

Showing data in client tagged fields after a client record has changed