

# Importing and Exporting Advanced Applications R2 (XML Format)

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## Introduction

The Advanced Applications module supports importing XML format applications for creating new clients and contracts, issuing new cards, as well as for editing contract properties and client records in the database.

Applications are imported using the "XML Applications Import" pipe. It is possible to generate reports on application processing results. The "XML Applications Response" pipe allows reports to be exported on application processing and any resulting errors. Reports are generated if the applications import pipe is started in deferred response mode (the pipe parameter DEFERRED\_RESPONSE="Y") (the menu item "OpenWay → Advanced Applications R2 → Application Processing → XML Applications Response" is used to export reports). If a formatting error is found or an error occurs when importing the application to the ADV\_APPL table, the entire file is rejected and the importing pipe generates a response file regardless of the value of the DEFERRED\_RESPONSE parameter.

When importing applications, the uniqueness of an application being imported is checked. This may be important, for example, if a large number of applications are being imported at the same time, and the list of applications being imported may contain two applications to perform the same action with the same system object.

Generally, during approval of applications imported by the import pipe, Product, Accounting Scheme, and Service Package statuses are checked. The APPL\_ALLOW\_NOT\_READY global parameter allows the status-checking mode to be switched on/off. To switch off the status-checking mode, set the APPL\_ALLOW\_NOT\_READY global parameter to "Y" (the default value is "N"). At the application acceptance stage, the system checks the status of Products, Account Schemes and Service Packages regardless of this parameter's value.

The "XML Applications Overall Response" pipe is used to export information about applications that were imported by the "XML Applications Import" pipe as well as about those that were created by entering data in DB Manager. The pipe exports information about applications with the "Posted" or "Declined" posting statuses and with the "Processed" outward status.

The module also supports export of issuing applications in XML format. Applications are exported by the "XML Applications Export" pipe. This pipe only supports the extended filename format.

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

To do so it is possible to use Altova XML Spy (<http://www.altova.com/>), for example.

If using Altova XML Spy, execute the check as follows:

- Open the file to be checked in XML Spy.

- Select the "DTD/Scheme => Assign Scheme" menu item.
- Specify the necessary schema from the corresponding 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
- Click the <F8> function key

XML Spy generates a corresponding message according to the check results. For instance, the "Expected element FormatVersion instead of SubAppList here in element Application" message means that a "SubAppList" element not present in the schema has been found.

## Chapter 1. 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.

### "XML Applications Import" Pipe Parameters

Parameter	Value	Parameter Description
INPUT_FORMAT	UFX/Application	Makes it possible to establish the format specified for an incoming file. Files in the wrong format will be rejected and put in the corresponding directory and the respective 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	Method used by default to identify the financial institution. When the "BRANCH" value is specified, the value of the Branch_Code field is used for identification (the default value); "BANK" is used for identification according to the Bank_Code field value, and "CB" for identification according to the CB_Code field value.
PRODUCT_GROUP		Product group code. Codes are defined in the Code field of the "OpenWay → 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. correspond to the length of the standard prefix "xadvapl").
FILE_CODING		File encoding available 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".
DEFERRED_RESPONSE	Y/N	Deferred generation of the outgoing response file; the default value is "N".
DEFERRED_PROCESSING	Y/N	Deferred processing mode (only unprocessed data will be imported); the default value is "N".
ERROR_DIR	String	Specifies the name of the directory for files processed with an error. The default value is: "@RBS_INTERCHANGE_DIR@\\Err".
OUTPUT_DIR	String	Specifies the name of the directory for response files. The default value is: "@RBS_INTERCHANGE_DIR@\\Out".

Parameter	Value	Parameter Description
PROCESSED_DIR	String	Specifies the name of the directory for processed files. The default value is: "@RBS_INTERCHANGE_DIR\Arch".
SOURCE_DIR	String	Specifies the name of the directory for incoming files. The default value is: "@RBS_INTERCHANGE_DIR\In".
GEN_POSIT_RESP	NO/WARN	This parameter determines whether a response file will be generated depending on the result of application processing. If this parameter has the "N" value, a response file will only be generated if an error occurs. When the parameter has the "WARN" value, 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 placed in the error file directory. The default value of the parameter is "N". If this value is specified, a response file will not be created, the file being imported remains in the incoming file directory and an error message is generated during repeat import.
RESPONSE_FOR_HEADER_ERRORS	Y/N	When this parameter has the "Y" value, a response file will be generated even when formatting errors occur. The default value is "N".
SOURCE_SYSTEM	String	The value of this parameter can be used to determine the workflow strategy.
SILENT	Y/N	This parameter specifies if parameter values will be requested from the user during pipe operation, and if a final report window will open. The default value is "N".
OLD_FILE_NAME	Y/N	When the value of this parameter is "Y" simple filename format will be used. The N value is used to work with extended filename format. The default value is "N".
NO_WF_SUPPORT	Y/N	Enables "No workflow" mode. The default value is "N".
APPL_ERROR_NOT_FATAL	Y/N	When the value of this parameter is "Y", the importing procedure will not be interrupted if an application containing an error is discovered. If the value of the parameter is "N", the procedure is interrupted. The default value is "N".

Parameter	Value	Parameter Description
USE_ORIGINAL_REG_NUMBER	Y/N	When the parameter is set to "Y", the OrigAppNumber field of the response file being exported contains the number of the original application. The default parameter value is "N" (original application numbers are not used).

## "XML Applications Response" Pipe Parameters

Parameter	Value	Parameter Description
ADVAPPL2	Y/N	When the value of this parameter is "Y", the pipe will be switched to "Advanced Applications R2" mode
FILE_TYPE	String	Response file type. By default, "ADV Applications".
FILTER	Expression	Additional filter in the FILE_INFO table. Examples: "ID=1650" – filter application files by ID "RECEIVED_BY = 22" – filter application files imported by a specific user "PARMS LIKE '0001%'" – filter application files by file sender code "REC_FILE_NAME LIKE '000100VA%'" – filter application files by file name.
FILE_CODING		File encoding allowed for XML files. For example: "utf-8" (default) "windows-1251"
RESP_NAME_PREFIX	Character	Prefix in the name of the outgoing response file; default value is "R".
ADD_XML_HEADER	Y/N	When the value of this parameter is "Y", the XML prefix will be added before the FileHeader aggregate of the response file. The default value of this parameter is "Y".
PRETTY_PRINTED	Y/N	When the value of this parameter is "Y", the file will be formatted according to the XML structure. The default value of the parameter is "N".
EXTENDED_CLIENT_INFO	Y/N	When the value of this parameter is "Y", the response file will contain extended client information if the incoming file contained this information. 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).
EXTENDED_CONTRACT_INFO	Y/N	When the value of this parameter is "Y", the response file will contain extended contract information if the incoming file contained this information. The default value of the parameter is "N" (only for XML

Parameter	Value	Parameter Description
		format version 1.0. For XML format version 2.0, the <a href="#">RESULT DTLS</a> parameter is used).
OLD_RESPONSE_CODES	Y/N	When the value of this parameter is "Y", the old numeric error codes will be used. The default value of this parameter is "N".
VALIDATE_FILE	Y/N	When the value of this parameter is "Y" (default), the file will be checked for compliance with the XSD scheme.
OUTPUT_FORMAT	UFX/IFX	The value of this parameter determines the version of the XML application format for the file being exported. UFX – version 2.0 (default value), IFX – version 1.0.
RESULT_DTLS		This parameter determines the volume of additional information included in the file to be exported. For example, if the "RESULT_DTLS=Client=IDT;Contract=IDT;" value is assigned to the parameter, 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.
SHORT_DEFERRED_RESPONSE	Y/N	This parameter determines if application data will be included in the response file or if only ErrorText/ErrorCode will be included for the application. The default value is "N".
GEN_POSIT_RESP	ALL/WARN/NO	This parameter determines what information will be included in the response file. If the "ALL" value is specified, all information will be included in the response file. If the "NO" value is specified for a successfully processed application only information about the application status is included in the response file. If the "WARN" value is specified, all information about an application processed with a warning will be included in the response file. The default value is "ALL".
APPL_INFO_IF_DECLINED	STATUS_INFO/ OBJECT_INFO/ FULL_INFO	This parameter specifies what information will be included in a response file if the application is declined.
MASK_CONTRACT_NUMBER	Y/N	This parameter specifies 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 the parameter is set to "Y", the OrigAppNumber field of the response file being exported contains the number of the original application. The default parameter value is "N" (original application numbers are not used).



Parameter	Value	Parameter Description
EXPORT_DATA_DIRECTORY		This parameter specifies the path to the directory used to store exported response files.
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 "Childen=Y;".</p>

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 "Changes Export" pipe (OpenWay → Advanced Applications R2 → Application Processing → XML Applications Response).

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 affiliated 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.

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 contract record.
- AffiliationClientInfo – information about affiliated clients.
- Balance – contract balances.
- 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 – custom information about services for a contract.
- Preferred – preferred counterparties for a contract.

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 the WAY4™ vendor.

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.

## "XML Applications Export" Pipe Parameters

Parameter	Value	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.
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".
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 of the ADV_APPL table.
RESP_FILE_PREFIX	Character	Prefix in the response file name; the default value is "xadvapl". The prefix must contain 7 characters (i.e. correspond to the length of the standard prefix "xadvapl").
PRETTY_PRINTED	Y/N	When the value of this parameter is "Y" (default), the file is formatted according to XML structure.
VALIDATE_FILE	Y/N	When the value of this parameter is "Y" (default), the file is checked for compliance with the XSD schema.
FI_CODE		Branch Code of the financial institution whose applications are being exported. Specified in single quotes, for example '0001'.
SENDER_CODE		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 in "Data/Rbs/Out/<...>" where exported files are placed.
FILE_TYPE	Expression	Value specified for exported files in the "FILE_TYPE" field of the "FILE_INFO" table. The default value of the parameter is "ADV Applications".
EXPORT_DATA_DIRECTORY		This parameter specifies the path to the directory used to store exported files.

## "XML Applications Overall Response" Pipe Parameters

Parameter	Value	Parameter Description
FILTER	Expression	Additional filter for the ADV_APPL table. For example: "ACTION_TYPE='ADD'" – filter all applications to add objects.
ADD_XML_HEADER	Y/N	When the value of this parameter is "Y", the XML prefix will be added before the FileHeader aggregate of the response file. The default value of this parameter is "Y".
FILE_CODING		File encoding allowed for XML files, for example: "utf-8" (default value) "windows-1251"
PRETTY_PRINTED	Y/N	When the value of this parameter is "Y", the file is formatted according to XML structure. The default value is "N".
RESP_NAME_PREFIX	String	Prefix in the name of the outgoing response file; the default value is "RBD". For information on filename format, see "Outgoing File Format".
RESULT_DTLS	String	This parameter determines the volume of additional information provided in the file being exported. For example, when the parameter value is set to: RESULT_DTLS=Client=IDT; Contract=IDT; only information on client and contract ID will be exported in the outgoing file. This is the default value.
MODE	RESPONSE/ RESPONSEWIT HEXPORT	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. The default value is "RESPONSE".
APPL_INFO_IF_DECLINED	STSTUS_INFO/ OBJECT_INFO/ FULL_INFO	This parameter determines what information will be included in the response file if the application is declined.
GEN_POSIT_RESP	ALL/WARN/NO	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. The default value is "ALL".

Parameter	Value	Parameter Description
SHORT_DEFERRED_RESPONSE	Y/N	This parameter determines if application data will be included in the response file or if only ErrorText/ErrorCode will be included for the application. The default value is "N".
SILENT	Y/N	This parameter determines if a final report window will open. The default value is "N".
MASK_CONTRACT_NUMBER	Y/N	This parameter determines if contract numbers will be masked in the response file. The default value is "N".
CARD_EXPIRE_OLD_MODE	Y/N	This parameter determines if information about the card term of validity will be exported in old format. The default value is "N".
EXPORT_DATA_DIRECTORY		This parameter specifies the path to the directory for storing exported response files.
SENDER_CODE		Sender code value specified in the filename in the Sender field of the FileHeader aggregate.
APPL_IN_FILE	Number	Maximum number of applications in one file. The default value is "10".
VALIDATE_FILE	Y/N	When the parameter has the "Y" value (default) the file will be checked for compliance with the XSD schema.
TRANSFORM_FILE		This parameter is used to specify xslt-transformation of an exported file.
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 <a href="#">RESULT_DTLS</a> parameter value must be "N" and the parameter must contain "Childen=Y;".

## "XML Applications Renew" Pipe Parameters

Parameter	Value	Parameter Description
INPUT_FORMAT	UFX/ Application	Makes it possible to establish the format specified for an incoming file. Files in the wrong format will be rejected and put in the corresponding directory and the respective record will be added to the process log. No response file is created for files in the wrong format.

Parameter	Value	Parameter Description
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 Code field of the "Advanced Applications → Applications Setup → 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".
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 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. The default value of the parameter 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	Value	Parameter Description
RESPONSE_FOR_HEADER_ERRORS	Y/N	When the value of this parameter is "Y", a response file will be generated even when format errors occur. The default value is "N".
SILENT	Y/N	This parameter determines whether parameter values will be requested from the user during pipe operation and whether a final report window will be opened. The default value is "N".
OLD_FILE_NAME	Y/N	When the value of this parameter is "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".
APPL_ERROR_NOT_FATAL	Y/N	When the value of this parameter is "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. The default value is "N".
USE_ORIGINAL_REG_NUMBER	Y/N	When the value of this parameter is "Y", the OrigAppNumber field of the exported response file will contain the number of the original application. The default value of the parameter is "N" (the number of the original application is not used).

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

## Chapter 2. Response File Error Messages

A response file may contain errors 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 message.

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".

### General Errors

Error code	Message text	Description
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.
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 relations 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.
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.



Error code	Message text	Description
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.

## Application Processing Errors

Error Code	Message text	Description
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.
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.

Error Code	Message text	Description
2025	<ErrMsg>	Errors when checking client data.
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.
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.
2043	Configuration error: Classifier value <%%> for CONTR_STATUS is not configured yet	Configuration error: Classifier value <%%> for CONTR_STATUS is not configured yet The contract status with the code <%%>, added to the Contract Statuses Reference (OpenWay\Full\Configuration Setup\Contract Types\Contract Statuses) is missed in the system classifier CONTR_STATUS (values are not synchronized).

Error Code	Message text	Description
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.
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 Accounting Scheme.
2062	Multiple Accounting Schemes exists for specified code	Several Accounting Schemes found for the specified code.
2063	Accounting Scheme is not ready	Accounting 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.

Error Code	Message text	Description
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.
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.
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.

Error Code	Message text	Description
2095	Transaction currency cannot be empty	A currency must be specified for the transaction.
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 when modifying usage limiter.
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.
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.

Error Code	Message text	Description
2121	Appl Info Type with ForWhom <%%> is not supported	Classifier of additional information (Application Info Type) is not supported for this object/process. <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.
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.
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.

Error Code	Message text	Description
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.
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.
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.

Error Code	Message text	Description
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
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.
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	Description
2188	Adv Application Order Department Missing	No financial institution branch specified for the application.
2189	Adv Applications Duplicate Count is incorrect	Invalid number specified in "Duplicate Count" field.
2190	Count of an Application Duplicates cannot be more than 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.
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. cancelation 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.
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.

Error Code	Message text	Description
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.
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.
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 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.

## Errors Processing Applications for Managing WAY4™ Users

Error code	Message text	Description
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.

Error code	Message text	Description
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 user.
2249	Invalid Action Type	Invalid action for user group record.
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 Status field not filled in.

## Errors Importing Applications

Error code	Message text	Description
2254	Too many payment receiver 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.
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 missing.
2261	Credit limit currency missing	Currency for changing credit limit 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	Description
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.
2288	Application is skipped: The service <Service_Name> is not active on this node "Node_Name"	Application skipped: the Service is not active in this HA node. 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.
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.
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.

Error code	Message text	Description
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.
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.

## Workflow Errors

Error code	Message text	Description
2700	WF Action cannot be processed:	Unable to execute this Workflow action.
2701	Any WF Action cannot be processed	No Workflow actions can be executed.
2702	Unsupported status for Application Remove Action. The Application already processed	Action to delete application is not possible. The application has already been processed.

## Errors in Checking the Uniqueness of Applications being Imported

Error code	Message text	Description
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.

Error code	Message text	Description
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 "Social Security Number" field 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.
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.
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.
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.
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.
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.
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.
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.
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.

## Chapter 3. File Format

### 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 Fig. 1.

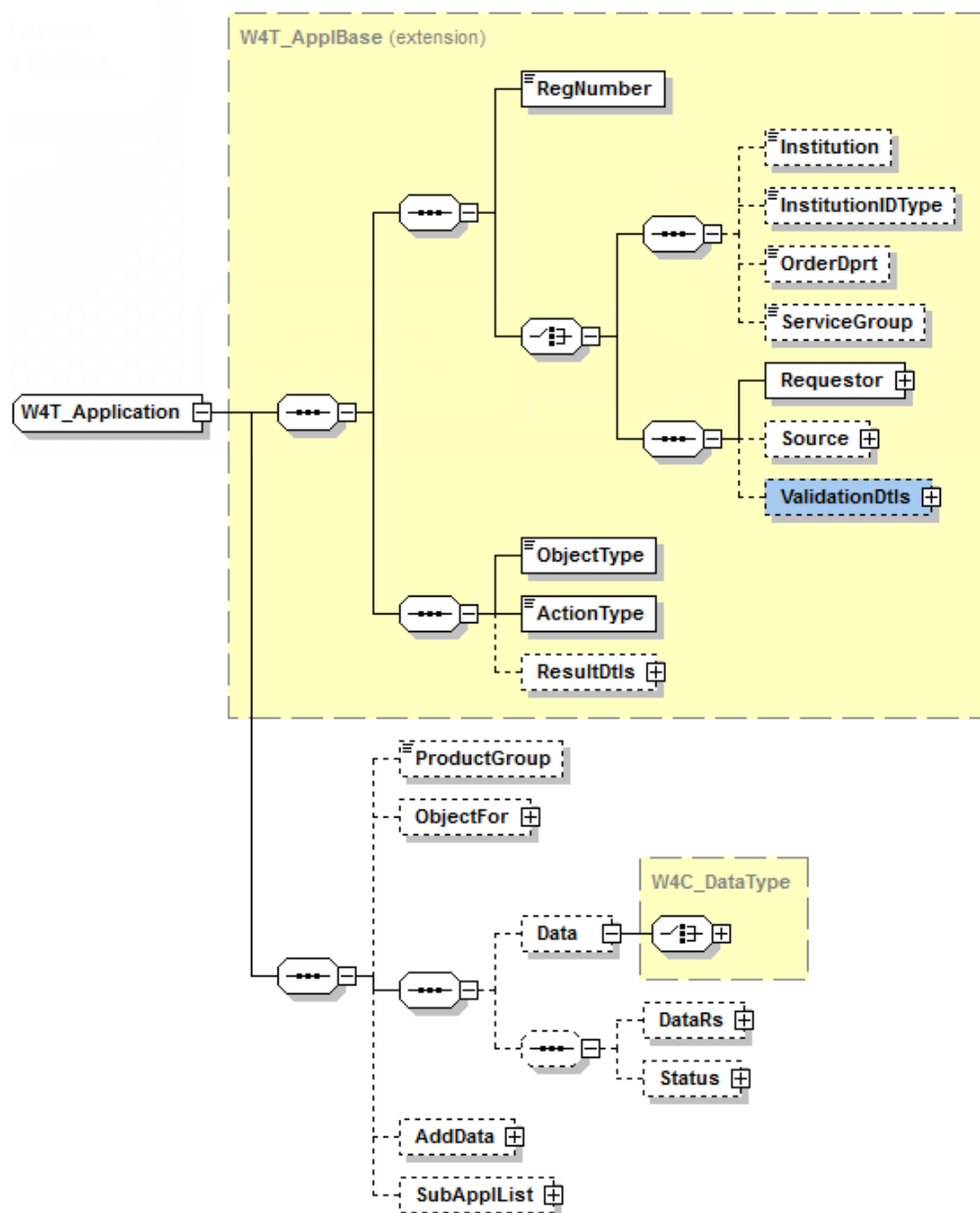




Fig. 1. Graphical representation of file format

The following conventions are used in the graphical representation:

- Mandatory structural elements are shown as solid line boxes – **ObjectType**
- Optional elements are shown as dashed line boxes – **ProductGroup**
- Elements reserved for future use are shown as crossed boxes – **DeviceInfo**

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

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

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.

Symbols X...Y next to an element mean that it may contain between X and 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):

No.	Field	Type	Usage	Comments
1.	File Name Prefix	C-1	M	"A"
2.	File Sender	C-4	M	Sender code is the last (right) 4 digits in the Sender field of the File Header aggregate or, if it contains less than 4 characters, the value of the field padded from the right with zero characters.
3.	Delimiter	C-1	M	"_" (<underline>).
4.	File Number	Integer (2 digits)	M	Sequential file number.
5.	Delimiter	C-1	M	Delimiter character "."
6.	File Date	Date (JJJ)	M	File creation date.

The structure of an extended filename:

No.	Field	Type	Usage	Comments
1.	File Name Prefix	C-7	M	"XADVAPL"
2.	File Sender	C-6	M	Sender code from the "Sender" field of the "FileHeader" aggregate. If the code contains less than 6 characters, it is right-padded with zeroes to 6 characters.
3.	Delimiter	C-1	M	"_" (<underline>).
4.	File Number	Integer (5 digits)	M	Sequential file number.
5.	Delimiter	C-1	M	Delimiter character "."
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">

File schema see in the xml\_appl\_schema.chm file.

## Outgoing File Format

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.

Files are generated in 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", "FileHeader", "NotificationsList", "Notification", "File Trailer".


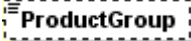
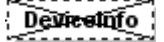
The next elements (together with their sub-elements) must take up exactly one row in the file: "FileHeader", "Notification", "File Trailer".


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 conventions are used in the graphical representation:

- Mandatory structural elements are shown as solid line boxes – 
- Optional elements are shown as dashed line boxes – 
- Elements reserved for future use are shown as crossed boxes – 

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

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

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

"Any" type elements contain XML structure whose format is undefined.

Symbols X...Y next to an element mean that it may contain between X and 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")):

No.	Field	Type	Usage	Comments
1.	File Name Prefix	C-1	M	Defined by pipe parameters. RESP_NAME_PREFIX (see ""XML Applications Response" Pipe Parameters"). 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 file has the same value as the File Sender field of the incoming file.
3.	Delimiter	C-1	M	"_" (underline).
4.	Inward File Number	Integer (2 digits)	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.
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:

No.	Field	Type	Usage	Comments
1.	File Name Response Prefix	C-1	M	Defined by pipe parameters. RESP_NAME_PREFIX (see ""XML Applications Response" Pipe Parameters", ""XML Applications Overall Response" Pipe Parameters").
2.	Inward File Name Prefix	C-7	M	"XADVAPL"
3.	Inward File Sender	C-6	M	Incoming file sender code. If the code is more than 6 symbols long, the last 6 symbols are used. If the code is less than 6 symbols long, it is left-justified and right-padded with zeroes to 6 symbols. This field has the same value as the incoming file's File Sender field.
4.	Delimiter	C-1	M	"_" (underline).
5.	Inward File Number	Integer (5 digits)	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.

File schema see in the xml\_appl\_schema.chm file.

## Chapter 4. Operations with Application Objects

Table 1 shows the list of application objects and operations with them. The "✓" sign indicates operations permitted for the operation object, and the "0" sign shows operations which are not permitted for that object. Operations whose names are marked with the "\*" character are only supported by pipes and are unavailable in module screen forms.

Table 1. Table of permitted operations with application objects

Type (Object/ Property)	Object	Action														
		Add	AddOrUpdate	Update	Activate Personal	Activate Individual	Activate Standard	Activate	EarlyRepayment	Cancel Early Repayment	PaymentHoliday	Close	Disable	Lock/ Unlock	Migrate*	Renewal*
Object	Client	✓	✓	✓	0	0	0	0	0	0	0	0	0	0	0	0
	ClientAddInfo	✓	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	ClientAddress	✓	✓	✓	0	0	0	0	0	0	0	0	✓	0	0	0
	ClientAffiliation	0	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	ClientContract	✓	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	ClientAuthMethod	✓	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	ClientClassifier	0	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	ClientParameter	0	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	Card	✓	0	✓	0	0	0	0	0	0	0	0	0	✓	✓	✓
	Contract	✓	0	✓	0	0	0	0	0	0	0	0	0	0	0	0
	ContractAddInfo	✓	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	ContractAddress	✓	✓	✓	0	0	0	0	0	0	0	0	✓	0	0	0
	ContractAffiliation	0	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	ContractAuthMethod	✓	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	ContractClassifier	0	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	ContractParameter	0	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	CustomerAuthMethod	✓	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0

Type (Object/ Property)	Object	Action														
		Add	AddOrUpdate	Update	Activate Personal	Activate Individual	Activate Standard	Activate	EarlyRepayment	Cancel Early Repayment	PaymentHoliday	Close	Disable	Lock/ Unlock	Migrate*	Renewal*
	Order	0	0	0	✓	✓	✓	0	0	0	0	0	✓	0	0	0
	Preferred	✓	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	PaymentReceiver	✓	✓	✓	0	0	0	0	0	0	0	0	0	0	0	0
	Counterparty	✓	✓	✓	0	0	0	0	0	0	0	0	0	0	0	0
	Relation	0	0	✓	0	0	0	0	0	0	0	0	0	0	0	0
	Instalment	✓	0	✓	0	0	0	✓	✓	✓	✓	✓	0	0	0	
	Tariff	✓	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Usage	0	0	0	✓	0	✓	0	0	0	0	0	✓	0	0	0
Property	CustomerClassifier	0	✓	0	0	0	0	0	0	0	0	0	0	0	0	0
	CustomerIdentifier	0	✓	0	0	0	0	0	0	0	0	0	✓	0	0	0
	Event	✓	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	Limit	0	0	✓	0	0	0	0	0	0	0	0	0	0	0	0
	InstalmentLimit	0	0	✓	0	0	0	0	0	0	0	0	0	0	0	0
	Status	0	0	✓	0	0	0	0	0	0	0	0	0	0	0	0

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

The "Migrate" action is only used for initial migration before starting to use the system.